Clinical Medicine

volume 7/number 12

December
1960

Proven

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"comprehensive" multivitamins — friend or foe?

WHY NO FOLIC ACID IN ADABEE®

While folic acid is a valuable hematologic agent when used alone, when administered in "comprehensive" multivitamins it may mask and obscure the diagnosis of incipient pernicious anemia.[1-13] Diagnosis so delayed may allow irreparable neurologic damage to occur before the true nature of the disease is recognized and treated.[4]

To help avoid this threat, and still provide necessary nutrition, Robins has formulated Adabee®, a new therapeutic multivitamin without folic acid that is especially safe for sustained multivitamin support.

why no vitamin B_{12} in Adabee®

To obtain therapeutic levels of specific vitamins for certain individual deficiencies, doctors must often employ formulas which include ingredients which are non-essential, expensive to the patient, and irrational.[4,7,10]

Because B_{12} has been described as needless in therapeutic vitamin mixtures by the A.M.A.[2], and its unnecessary[1,8,10,14,15] use has been criticized by astute hematologists,[7] internists,[10] pathologists,[12,13] and nutritional workers,[2] it has been omitted from Adabee.

Each yellow, capsule-shaped Adabee® tablet contains:

Vitamin A	25,000 USP units
Vitamin D	1,000 USP units
Thiamine mononitrate (B_1)	15 mg.
Riboflavin (B_2)	10 mg.
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Calcium pantothenate	10 mg.
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Each green, capsule-shaped Adabee®-M tablet contains Adabee, plus nine minerals:

Iron	15.0 mg.	Zinc	1.5 mg.
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Copper	1.0 mg.	Calcium	103.0 mg.
Manganese	1.0 mg.	Phosphorus	80.0 mg.
Magnesium	6.0 mg.		

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new ADABEE®

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The Care of the Dying

JAMES M. NORTHINGTON, M.D., *Editor-in-Chief*

This is an abridgement of an address given by Alfred Worcester, M.D., Professor of Hygiene at Harvard, to the Academy of Medicine of Cincinnati in 1932. It was published in The Journal of Medicine and Southern Medicine & Surgery in 1932, and in the latter journal again in 1935.

One of my medical school professors was Oliver Wendell Holmes. I have not forgotten his insistence that, while to assist at the coming-in is one of the physician's functions, another is to assist at the going-out.

During the past half-century, as we all know, there has been vast improvement in diagnosis and therapy in medicine. But, instead of any progress in the art of caring for the dying, medical practice has deteriorated. Many doctors nowadays, when the death of their patients becomes imminent, seem to believe it is quite proper to leave the dying in the care of nurses and sorrowing relatives.* This shifting of responsibility is unpardonable. And one of its bad results is that as less professional interest is taken in such service less and less is known about it. Every medical student ought to have clinical instruction for such service and afterwards he should be required to hand in several reports of his attendance at the deathbed of patients entrusted to his care. In his future practice he then might fairly be expected to know at least something of what ought and ought not to be done for the dying.

The history of the patient as well as his disease may help in differentiating the approach of death from similar states of collapse where restoration is possible. Thus the injury already suffered, whether by accident or disease, may preclude life's continuance. Old age is the only natural cause of death, and natural death is merely falling asleep. This crowning mercy is vouchsafed to few. Infants and young children die very easily;

*The plain implication that only a quarter century ago, most folks died in their own beds, is worthy of note.—*Editor.*

their hold on life is but slender.

The signs of approaching death ought to be unmistakable. The *facies Hippocratica* is perhaps our earliest picture of a patient *in articulo mortis:* "the nose sharp and pinched, eyes sunk in orbits and hollow, ears pale, cold and shrunken with lobes inverted, face pallid, livid or black." Shakespeare's account of the death of Falstaff is still more vivid. The hostess says:

> " 'A made a finer end and went away and it had been any christom child. 'A parted even just between twelve and one, even at the turning o' the tide: for after I saw him fumble with the sheets, and play with flowers, and smile upon his fingers' ends, I knew there was but one way; for his nose was as sharp as a pen and 'a babbled of green fields. 'How now, Sir John,' quoth I: 'what, man! be o' good cheer.' So 'a cried out, 'God, God, God!' three or four times. 'A bade me lay more clothes on his feet. I put my hand into the bed and felt them, and they were as cold as any stone."

The process of dying is a progressive failure of the vital functions. Sensation and power of motion as well as the reflexes are lost in the legs before in the arms. In the intestinal canal, before the patient can no longe swallow, the anal sphincters r lax, peristalsis ceases, and th stomach distends. The folly, u der such conditions, of attemp ing to give nutriment or medi cine by either mouth or rectu is evident; the folly of it become even more glaring when late there is at least equal chanc that the fluids given by th mouth will run down the tra chea. This is not an infrequen cause of the "death rattle" whic is a needless addition to the dis tress of the family. If the rattl is due to hypersecretion of th bronchial mucosa it can some times be stopped by the hypoder mic injection of a large dose atropine.

As long as the patient ca swallow, water either pure mixed with sour wine should b offered with increasing frequen cy but in lessening amount Toward the last, after even a fe drops would cause choking, if gauze wicking one end of whic is held in a cup of ice water, i put into the patient's mouth often will be gratefully sucked Sucking is our first and last crav ing. The complaint just before the Death on the Cross was " thirst." And then the sponge dipped in vinegar was the kind est possible offering.

It must not be forgotten tha the Biblical phrase of "th

tongue cleaving to the roof of the mouth" is no empty figure of speech. Such misery, as well as every other discomfort from lack of saliva, can be prevented by applying glycerin to the tongue, or perhaps even better by placing bits of ice, enmeshed in a strip of gauze, well back between the gums and cheek. As ice so placed melts, the moisture therefrom evaporates without endangering choking.

When on the other hand there is too much fluid in the mouth, as from regurgitation, gauze wicking similarly placed often affords the needed relief. But in these cases it is imperative that the patient shall be turned upon his side to allow gravity drainage. This procedure should also be employed when stertorous breathing is caused, as it often is, by a falling back of the tongue. Change of posture often relieves the dying patient's general discomfort. Never should it be forgotten that the reason why patients *in extremis,* or unconscious from whatever cause, so generally are found lying flat on their backs is simply because they are not able either to make known their need of help or to shift themselves from that position. They may still appreciate the comfort that a change affords. When the respiration becomes labored it is of great help to lift the upper half of the body, provided always that care is taken to support the lower back and to let the shoulders fall backward in order to give all possible freedom for chest movements. It is also important so to pillow the head that the neck shall not flex on the body.

As the peripheral circulation fails there usually is a drenching sweat, and the body surface cools, whatever may be the temperature of the surrounding air. This sweating is most profuse on the upper parts of the body, and on the extensor rather than on the flexor surfaces as in health. Sponging off this sweat with cloths wrung out of diluted alcohol often comforts the patient. However cold the body surface becomes, the dying are almost never conscious of cold—on the contrary, they usually feel too hot. Once a nurse dying of pneumonia, whose body surface was cold, in answer to my question if I could do anything for her, said she wished I would take her to the top of a hill nearby where she might lie in a snowbank. Even when supposed to be unconscious the restlessness of the dying is often caused by this sensation of heat. As the surface cools, the inward temperature instead of lessening as in ordinary collapse, rises high. The tossings are often only their efforts to throw off the bedclothes. Lighter and less covering is

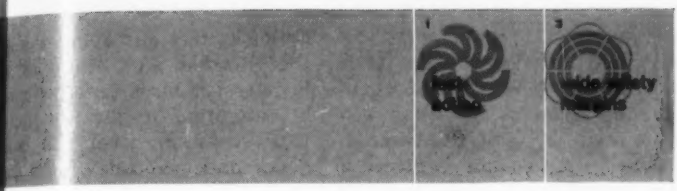
what is needed. Fresh air in abundance is of course essential. That it shall be kept moving is more important for the patient's comfort than the matter of its temperature. A slow-running electric fan is what serves best, the air fanned at right angles. I have never seen any comfort derived from the use of oxygen on such occasions.

The chamber should be well lighted as the patient enters the valley of the shadow. The dying, as long as they are able to do so, turn towards the light. Some complain of the growing darkness. A dying consumptive once begged me to carry her from her shaded chamber out into the sunshine. I shall never forget her gratitude as she died looking straight at the rising sun.

As sight and hearing fail, the dying see only what is near and hear only what is distinctly spoken almost in their ears. They are often disturbed by sounds no longer distinguishable. Whispering at this time is unpardonable. Many seem to enjoy soothing music. In the *Feier Abend Haus* of the deaconess hospitals in Germany, where the dying are more beautifully cared for than anywhere else in the world, hymns are played for them on the organ in the adjoining chapel.

However great the previous suffering, there is always an interval of perfect peace and ofte of ecstasy before death. Even i cases of angina pectoris, whe in previous attacks the patien have longed for release from lif in the last attack there usuall is far less suffering, and eve this disappears before loss o consciousness. Indeed, this ce sation of pain is often a sig of impending death. All compe tent observers agree that ther is no such thing as "death ago ny," except in the imagination The contortions of the dying body seem to be evidence o suffering, but it is seeming only Many who are quite ready o even eager to leave this worl dread the act of leaving. Thei fear is as needless as the fea of being buried alive. Neverthe less, so common is this fear eve among otherwise intelligent peo ple that it is well for every phy sician to have at his tongue's en a full supply of fear-dispellin evidence.

Those who have been rescued from death by drowning even after hours of artificial respira tion say that before losing con sciousness they experienced no suffering whatever. Those who are conscious to the very last invariably answer that they do not suffer. William Hunter, the great anatomist, who retained his consciousness to his last breath, just before he died whis pered, "If I had strength enough



2

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hensive*

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*Covers any degree of cerebral depression —from mild sedation to deep hypnosis.

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to hold a pen, I would write how easy and pleasant a thing it is to die." In Edward Hammond Clarke's "Visions," posthumously edited by Oliver Wendell Holmes, the account is given of the death of one of his patients who had arranged to signal by finger movements, after he should become otherwise unable to answer. To the very last, after he appeared to have lost all consciousness, this patient signaled "No," in answer to Dr. Clarke's questions if he were suffering.

However painless the final stage, discomfort and suffering are only too possible in the earlier stages of dying. Much of this is avoidable. Some of it, as we have seen, is due to lack of proper treatment or to wrong treatment of the patient. In the latter case the harm is generally from failure to recognize that the treatment needed is radically different from what is appropriate when restoration is possible. How fatuous it is to apply artificial heat after the heat regulation of the body fails. All such disturbance of the dying patient is inexcusable. It may be easier in such a case, as it often is in other exigencies, for the physician, against his own judgment of what is best for the patient, to surrender to the prejudices or desires of relatives who do not understand and so cannot accept the facts. All of the physician's patience, tact and sympathy a then needed, and, above all, h firmness. If he is unrenditting his attention to the patient h will eventually win the confi dence and gratitude of the fam ily; and, what is of far more worth, he will have the satisfac tion of knowing that he is doing as he would be done by.

There is the possible bladder distention to be looked out for This may require catheteriza tion. More often there is drib bling and the consequent dis comfort of a wet bed and foul odors. After patients are no longer able to make known their wants they sometimes recogniz the opportunity afforded by properly placed bedpan; and even after their sphincters are relaxed they may still be able to appreciate proper protection

The discomfort and sufferin of the dying almost always ca be relieved by medical treat ment. The occasional service ableness of atropine has been mentioned. If morphine fails to give comfort, a hundred to one it is either because too small doses have been given or because it has not been successfully introduced into the enfeebling circulation. Large and frequent doses may be needed. As the end approaches, a full grain is not too much of a dose, and if then the needle cannot find a

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vein, it is always easy for a long needle to reach the heart. Morphine toward the last may not slow the hurried respiration, but it will often stop a strangling cough and the far more distressing regurgitation. Its main effect is its soothing influence.

Under proper direction, the nurses can give most of the service needed, but it is unfair to expect it of them unless in the execution of direct orders which very likely may have to be frequently changed. Even if no such active measures of relief are needed, that very fact is for the physician to decide. In such cases it is for him to protect the patient from the disturbance of officiousness. Even when only watchful waiting is needed, the physician must not underrate the help that his mere presence may afford in steadying and comforting both the dying patient and the family. "They also serve who only stand and wait."

Difficult as it may be to decide when dying begins, sometimes there is less difficulty in deciding just when death occurs. It is incumbent upon those of us who have made such mistakes to warn our younger brothers of the close resemblance between death and suspended animation. All these modern methods of resuscitation, which are obligatory where valuable lives might thus be saved, are decidedly out of place where resuscitation would only renew the patient's sufferings. Such attempted defiance of Nature is even less justifiable than efforts for the prolongation of life when the inevitable approach of death offers merciful release. And yet in both of these ways too many of our profession seem to believe themselves in duty bound to do their utmost. They ought to know better. Just as the dying ought to be allowed to depart in peace, so after their apparent departure their bodies should not be too immediately disturbed. Such disturbance of the dead robs the bereaved bystanders of the sense of perfect peace that otherwise would be their consolation.

Thus far we have considered only the physical phenomena of dying. Such knowledge is essential, but right treatment depends still more upon the physician's appreciation of his dying patient's personality. Such appreciation distinguishes the physician from the veterinary. And these suggestions regarding the proper physical treatment are of small importance except as they furnish the doctor sufficient reason for taking care of his dying patients.

In the practice of our art it often matters little what medicine is given, but matters much

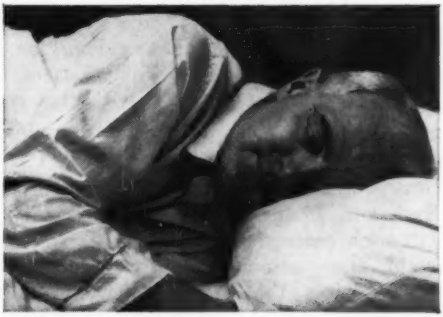
for the un nfortable patient

for the distraught patient

for the overtired patient

relaxing, restful sleep

without barbiturates, bromides or narcotics



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Each SOMINEX tablet provides: Methapyrilene HCl, 25 mg.; scopolamine aminoxide HBr, 0.25 mg.; salicylamide, 200 mg. *Dosage:* 2 tablets one-half hour before retiring. Some patients will require only one tablet. *Supplied:* vials of 18 tablets.

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that we give ourselves with our pills. Until the doctor has had the sad experience of standing by to the very last those nearest and dearest to him, he can only imagine the heartache of his dying patient's family and their sore need of sympathy; nor until he himself has seen nigh unto death can he more than imagine the comfort that the firm clasp of a friendly hand can give to one in such extremity.

While the patient's health is restorable or even while his life can be prolonged by purely scientific treatment, the absence of any interest in his personality may not be noticeable. But when the body is nearing its end, especially when consciousness continues to the last, and when as often happens in such cases the real character of the patient shines forth more plainly than ever before, then it is that materialism reveals its utter helplessness.

Agnosticism regarding a future existence, or even absolute disbelief of it, never can absolve the physician from devoting his attention to his dying patient's personality. Just before death there are occasionally very remarkable recoveries of consciousness; in such cases it sometimes happens that the patient is found to have heard what has been said at his bedside, while to all appearances he was tot unconscious. Usually in the p cess of dying there is a grad loss of consciousness, the or and progress of which is o with difficulty distinguish from the patient's increas inability to communicate thoughts. Long after his wh pered words have become audible the patient may be a to signify assent or dissent slight movement of the head hand. Still later only the ey are able to reveal the dy mother's love for her childr This final loss of all commu cation with the world may pr cede death by many hours only by moments.

In my own practice, an ag widow, who, in spite of card renal embarrassment had be able to be up and about, feeli uneasy, asked a neighbor to st the night with her. It was we for she died before morni When I asked the neighb watcher if she had noticed a signs of impending death, "O yes," she said, "the poor s was perfectly happy and w talking to her husband off a on through the night, as if h were really lying beside her.

Once on my hospital visit found a patient propped up bed, smoking a cigarette a reading the morning paper. H seemed to be normally convale

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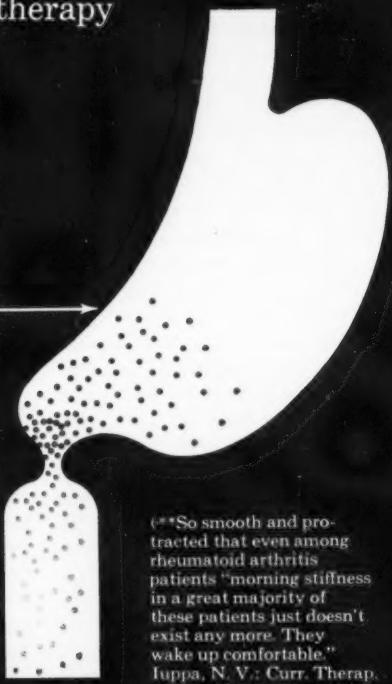

(**So smooth and protracted that even among rheumatoid arthritis patients "morning stiffness in a great majority of these patients just doesn't exist any more. They wake up comfortable." Iuppa, N. V.: Curr. Therap. Res. 2:177 (June) 1960.)

*Trademark, Reg. U. S. Pat. Off. — methylprednisolone, Upjohn

†Trademark

Medrol hits the disease, but spares the patient

cent after an appendectomy a week earlier. As I left his room the nurse stopped me to report that the patient had been talking to some visitor invisible to her, who he said was dressed in white. I went back to ask him about it. "Oh, it was only my sister," he answered casually and went on reading the newspaper. His sister had died previously, yet her presence seemed to him merely a natural fact. A few hours afterwards without any other warning, his heart suddenly stopped beating. In neither of these cases have I any reason to think that the one dying had any sure belief in the reality of the after life. They were not religiously inclined.

In the case I am now to describe, such a belief and inclination was my uncle's very life. For nearly a year he had been suffering what used to be the usual ups and downs of pernicious anemia. His mind had continued wonderfully clear. No sign had appeared that his death was near. He was apparently wide awake. Suddenly, he half rose from his couch to greet his father who had died many years before. His face was radiant with joy, as he called me to join in the welcome of his visitor. Evidently disturbed by my hesitancy, he asked anxiously, "Did you not see your grandfather?" I had just finished a letter saying I saw no reas why my uncle should not l for months to come, and I add a postscript, telling of the visi and of my belief that the e would come very soon, and did.

Whatever may be the explan tion of such visions, they affo great comfort to those who a cept them as evidence of t reality and nearness of tho who have gone before. So, t do the last words or rapture looks of the dying, when th seem directed beyond this wor Those less credulous and y wanting to believe will ask, wi Dr. Clarke: "May not the gold bowl, just as it is shattered, touched by rays from a li that is above it and flash with glory no language can describe

It is the physician's function decide when all treatment d signed for restoration shall replaced by what is more like to comfort the patient. Devoti to the truth does not require t physician always to voice h fears or to tell his patient he thinks he knows. But, aft he has decided that the proce of dying has actually begun, on in exceptional circumstanc would a physician be justifi in keeping to himself his opinio In such cases his only questio should be whether to tell the p tient or the family, and, wh

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milk-like action...

no constipation or laxation...

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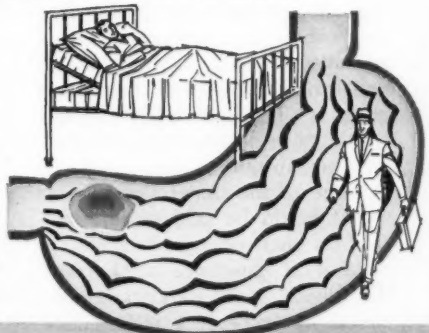

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Riker

Northridge, California

both are to be told, which to tell first.

Most dying patients have the feeling that death is near. Some know it well enough and yet want nothing said about it; or perhaps, while they like to talk of it with the doctor and nurses, they cannot bear to speak of it to their families. Some families, on the other hand, prefer not to be hold the truth and are particularly anxious lest anything be said that might alarm the patient. In other cases, perfect frankness all around is what is wanted. While decided family preferences are entitled to utmost consideration, there are certain obligations that require the physician to disregard them. Either the patient or the family, or both, may believe in the necessity of religious preparation for death. In such cases the physician is bound to give timely notice and also every facility for such ministrations.

Much of the uncertainty as to what should be said or left unsaid on such occasions is owing to general ignorance of the fact that death is almost always preceded by a perfect willingness to die. I have never seen it otherwise, even where the circumstances of life have made its continuance seem most desirable.

Our human nature is such that uncertainty is hardest to bear. And much of the frantic distress of the family, which, if allo[wed] expression, would be distur[bing] and unfair to the dying pa[tient] can be kept hushed by p[ro]talk from the physician. T[he] can smother their sobbing[s] they are told that the dying [pa]tient, although apparently [un]conscious, yet may hear [and] know all that is going on. [Even] even on the remote chance t[hat] their loved one will again be [able] to see them, if for only a m[o]ment, smiles can be made to k[eep] tears from overflowing.

No small part of the phy[si]cian's duty, and privilege, in a[t]tending the dying is to stea[dy] and comfort the stricken fami[ly]. This can best be done by givi[ng] each one some share in the nu[rs]ing service. Even if clumsi[ly] their touch may be far mo[re] grateful to the patient than th[at] of the most skillful nurse. And, only for their sake, whatev[er] they can do they should be a[l]lowed to do.

In the life story of the greate[st] physician any of us has ever known, which has been so well told by Harvey Cushing, there is a lovely picture of his wonderful appreciation of personality. It is the mother's account of Dr. Osler's care of her dying child.

> "He visited our little Janet twice every day from the middle of October until her

th a month later, and se visits she looked for- rd to with pathetic eager- ss and joy . . . Instantly e sick room was turned into ryland, and in fairy lan- age he would talk about e flowers, the birds, and the lls . . . In the course of this would manage to find out he wanted to know about e little patient.

"The most exquisite mo- ent came one cold, raw ovember morning, when the nd was near, and he brought ut from his pocket a beau- iful red rose, carefully rapped in paper, and told ow he had watched this last ose of summer growing in is garden and how the rose ad called out to him as he assed by, that she wishes to o along with him to see his little lassie.' That evening we ll had a fairy tea party, at a tiny table by the bed, Sir William talking to the rose, his little lassie and her mother in a most exquisite way . . . and the little girl understood that neither fairies nor people could always have the color of a red rose in their cheeks, or stay as long as they wanted to in one place, but that they nevertheless would be happy in another home and must not let the people they left behind, particularly their parents, feel bad about it; the little girl understood and was not unhappy."

If our eyes moisten over this example of perfect practice of our art, let no despair from being so far behind this great master prevent us from following such leadership. Above all, let us remember that our duty to our patients ends only with their death, and that in the preceding hours there is much that we can do for their comfort. At the very least, we can stand by them.◀

both are to be told, which to tell first.

Most dying patients have the feeling that death is near. Some know it well enough and yet want nothing said about it; or perhaps, while they like to talk of it with the doctor and nurses, they cannot bear to speak of it to their families. Some families, on the other hand, prefer not to be hold the truth and are particularly anxious lest anything be said that might alarm the patient. In other cases, perfect frankness all around is what is wanted. While decided family preferences are entitled to utmost consideration, there are certain obligations that require the physician to disregard them. Either the patient or the family, or both, may believe in the necessity of religious preparation for death. In such cases the physician is bound to give timely notice and also every facility for such ministrations.

Much of the uncertainty as to what should be said or left unsaid on such occasions is owing to general ignorance of the fact that death is almost always preceded by a perfect willingness to die. I have never seen it otherwise, even where the circumstances of life have made its continuance seem most desirable.

Our human nature is such that uncertainty is hardest to bear. And much of the frantic distress of the family, which, if allowed expression, would be disturbing and unfair to the dying patient, can be kept hushed by plain talk from the physician. They can smother their sobbing if they are told that the dying patient, although apparently unconscious, yet may hear and know all that is going on. And even on the remote chance that their loved one will again be able to see them, if for only a moment, smiles can be made to keep tears from overflowing.

No small part of the physician's duty, and privilege, in attending the dying is to steady and comfort the stricken family. This can best be done by giving each one some share in the nursing service. Even if clumsier, their touch may be far more grateful to the patient than that of the most skillful nurse. And, if only for their sake, whatever they can do they should be allowed to do.

In the life story of the greatest physician any of us has ever known, which has been so well told by Harvey Cushing, there is a lovely picture of his wonderful appreciation of personality. It is the mother's account of Dr. Osler's care of her dying child.

"He visited our little Janet twice every day from the middle of October until her

death a month later, and these visits she looked forward to with pathetic eagerness and joy . . . Instantly the sick room was turned into fairyland, and in fairy language he would talk about the flowers, the birds, and the dolls . . . In the course of this he would manage to find out all he wanted to know about the little patient.

"The most exquisite moment came one cold, raw November morning, when the end was near, and he brought out from his pocket a beautiful red rose, carefully wrapped in paper, and told how he had watched this last rose of summer growing in his garden and how the rose had called out to him as he passed by, that she wishes to go along with him to see his 'little lassie.' That evening we all had a fairy tea party, at a tiny table by the bed, Sir William talking to the rose, his little lassie and her mother in a most exquisite way . . . and the little girl understood that neither fairies nor people could always have the color of a red rose in their cheeks, or stay as long as they wanted to in one place, but that they nevertheless would be happy in another home and must not let the people they left behind, particularly their parents, feel bad about it; the little girl understood and was not unhappy."

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"Pastel" Children

WILLIAM DANIEL SNIVELY, JR., M.D.,* *Evansville, Indiana*

►*The irritability, retarded growth, and susceptibility to infection and digestive upsets of these children, described as "pastel" because of their striking pallor, are apparently attributable to a deficiency of protein in their diets. Re-education of the parents is the most important approach to therapy.*◄

Childhood malnutrition in a land of plenty is a paradox, yet countless American children are nutritionally submarginal. Although such children appear superficially normal, an objective appraisal reveals that they are retarded in their growth, irritable, victims of repeated digestive upsets and infections. The striking pallor of these tired children led one pediatrician to describe them as children in the pastel tints.

The Typical "Pastel" Child

The stereotyped presenting complaint is that the child won't eat. A thumbnail sketch would reveal a four-year-old taken to the doctor because he tires quickly, is nervous, and refuses to eat at mealtime. Such a child might live with four adults—his parents and grandparents. At meals he is the target of a barrage of coaxing and bribing. He nibbles constantly between meals, washing down crackers and cookies with milk and soft drinks, and then refuses to eat meat and other solid foods at the table.

This typical "runabout" is underweight and under height for his age. His tissues and muscles are soft and flabby, and his posture is poor. He has many decayed teeth and a pale skin. He characteristically has a hypochromic microcytic anemia. He is irritable and resents the physician's examination. Strangely enough, the immediate responsibility for this kind of malnutrition rests upon parents who try too hard.

*Attending Physician, Child Health Conferences, St. Mary's and Protestant Deaconess Hospitals; Lecturer in Pediatrics, University of Louisville School of Medicine; Vice President, Medical Director, Mead Johnson Company, Evansville, Ind.

Facts and Fancies About Growth and Appetite

The problem starts when the baby's growth rate drops precipitously beginning about the fourteenth month. During the first year, baby has gained about sixteen pounds, as much as he will gain in the next four years added together. His growth rate then decreases until a sort of valley of minimal growth occurs during the third or fourth year. After this the growth rate accelerates, reaching a peak in adolescence, when it almost equals in absolute terms the rate during infancy.

Appetite parallels growth rate. When the growth rate drops, so does the appetite. The baby's growth rate is high and his appetite ravenous. The pastel child's growth rate is low and his appetite minuscule. Most parents and some physicians are unaware of this drastic drop in the growth rate. While the child's appetite and desire for food have decreased, mother's desire to poke food into him has not lessened one whit.

Unfortunately, most parents are poorly informed regarding the facts of nutrition and growth and are provided instead with a motley assortment of fables. They don't realize, for example, that infants and children should be fed in accordance with their appetite, which is determine largely by growth needs. The don't realize that while milk co tains important nutrients, it i not the alpha and omega of nu trition. Preschool children ten to substitute milk and readil gulped tidbits for a balance diet when food is forced at mea time. In 1931 Doctor Josep Brennemann, the father of mod ern pediatrics, said: "Milk, th great 'protective food,' has bee crammed down our and ou children's throats, in season an out of season, although the ob serving, practical pediatricia has long known that even in th use of milk, children should b dealt with as individuals an that the slogan of 'a quart milk or more a day' originated i the laboratory, and has a swe er sound to the milk produc than to the pediatrician."

Parents don't realize th fruits are just as nutritious vegetables and are usually be ter accepted. They are not awa that minerals and vitamin while necessary for a balance diet, are not substitutes for ot er nutritional essentials. All to frequently they do not realiz that proteins are needed by chi dren as well as animals. The don't realize that no normal chi will starve with food in front him unless an attempt is ma to force him to eat. They w

ctive people who won't take time to eat properly, MYADEC can help prevent iencies by providing comprehensive vitamin-mineral support. Just one capsule supplies therapeutic doses of 9 important vitamins plus significant quantities essential minerals and trace elements. MYADEC is also valuable in vitamin etion and stress states, in convalescence, in chronic disorders, in patients on estricted diets, or wherever therapeutic vitamin-mineral supplementation is cated.

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sometimes erroneously convinced that hunger is a harmful sensation, and that children should never be permitted to remain hungry. They fail to realize that no preschool child should be expected to eat three large meals a day.

Problems of the Transition Period

Even when parents are well informed, provision of optimal nutrition for the runabout is not easy. He is a "changeling" (neither baby nor child). One of his most perplexing transitions concerns the form in which food is taken. During the first year he is essentially a sucking animal. After this he must learn to chew his food and to employ adult utensils. Another basic problem is that, although his over-all rate of growth has slowed down, his muscles and bones are developing in an important way. Hence protein, which provides the building blocks for growth, is needed in increasing rather than decreasing amounts. Emotional and social growth are making inordinate demands, too. During the preschool years the child becomes an individual—an assertive, negativistic individual. While he is choosey, he can't make choices. So, parental misinformation on the one hand and the inherent problems of the preschool transition period on the other add up to malnutrition a a pastel tinted child.

Childhood Hypoproteinosis

The diets of these children a strikingly inadequate in protei Probing and careful appraisal the history are required. T mother is asked to record ever thing that goes into the child mouth for a period of two three days. The protein conte is then checked, using for th purpose one of the excelle booklets available.[1]

There are no adequate labora tory tests for mild protein d ficiency. The albumin level i the blood, helpful as an index severe malnutrition, is not usef in childhood hypoproteinos perhaps because a decrease the blood volume with result hemoconcentration makes an a normally low albumin level a pear normal. The hemoglob level is a fairly accurate te provided the child has been g ting adequate amounts of iro The hypochromic microcyt anemia seen in these children a pears to be caused not only b iron deficiency but by protei deficiency as well. Provision o one of these nutrients witho the other will not improve th blood picture.

1. Bowes, A. deP., & Church, C. F., Fo Values of Portions Commonly Used, ed by A. deP. Bowes, Eighth Edition, Co Offset Press, Philadelphia, 1956.

Indoctrinating the Parents

First of all, parents are helped to realize why good nutrition is important. They must accept the fact that the child's health depends in large part on what he eats. Unfortunately permissiveness in diet results in a high carbohydrate diet, washed down with palatable liquids. Children once conditioned to an intake of milk, sweets, and starches continue to crave it. Proper nutrition is required for health, which means vigor, adequate resistance to infection, a ruddy color, firm straight bones, sound teeth, firm musculature, and a happy psychologic outlook.

Next, parents are told what foods are needed for health. The importance of protein must be explained to them; they must realize that foods providing generous amounts of this nutrient must replace high carbohydrate tidbits and palatable liquids, and that the important high protein foods include eggs, cheese, poultry, fish, and some vegetable proteins, particularly soybean protein. Though milk contains protein, it is a dilute source and too often is used as a vehicle for washing down starchy foods. The child drinking excessive amounts of milk and not eating other foods in sufficient quantities is all too frequently malnourished.

Parents should also realize that a nutritionally deficient child cannot be restored by the expedient of a tonic. No tonic can relieve the parents of the more difficult task of establishing the new way of family life required if sound eating habits are to be developed.

Recommended Diet

After the parents have been told what protein is — how it is the "keystone nutrient" essential for growth, for defense against infection, for repair of tissues, and for manufacture of enzymes—then they are given the following diet list:

BREAKFAST
Fruit juice
Egg & bacon or ham
Cereal or whole-wheat toast & butter
Small glass of milk *at end of meal*

LUNCH
Fruit
Cottage cheese, egg or meat
Whole-wheat or rye bread & butter
Small glass of milk *at end of meal*

DINNER
Meat, fish or chicken
Vegetables or fruit
Whole-wheat bread & butter
Fruit dessert
Small glass of milk *at end of meal*

When milk has been consumed to the exclusion of other foods it is omitted from the diet until the disorder has been corrected. For the child "addicted" to milk this omission is the key to success, accomplishing abruptly the drastic changes in eating habits necessary for correction of the ailment.

Inducing Healthful New Eating Habits

How do parents go about influencing the child to eat the necessary foods?

1. There must be a time and place for eating; the time is mealtime and the place is the table. No food will appear attractive if the child can eat anything any time any place. The child must want to eat. He cannot be made to want to eat by drowning him in a sea of food.

2. With rare exceptions only fruit, vegetables, and water should be allowed between meals. Hunger is the chief stimulus to eating, the only stimulus for the preschool child. It is fun to eat when hungry. A child who has never been allowed to become hungry is an underprivileged child.

3. Mealtime should be made short and pleasant; the decision to eat or not eat should be made by the child. If he does not care to eat he should be dismissed from the table promptly with no more food until the next meal. He should not be punished with food!

4. The child, as a member of the family group, is not a privileged character but is to eat the family fare. Small amounts of food, with emphasis on protein, should be placed before him. He should be given additional amounts if he desires them, but only if he desires them.

Preventing Poor Eating Habits

Prevention of childhood malnutrition is better and easier than cure. It can be achieved by consultation between parents and physicians at the end of the first year. In this conference the doctor points out that the baby's growth rate, like his appetite, will decrease drastically shortly after his first birthday. The mother is helped to realize that she must sublimate her maternal instinct for poking food down the child's throat into active interest and enthusiasm for his total growing-up process.

The bottle should be abandoned abruptly at the end of the first year. There are many reasons against the bottle habit following the end of the first year—sanitary, nutritional and psychologic. Milk should be confined to a small glass at the end of each meal, not more than a pint to a pint and a half a day. The pernicious habits of between-meal snacks and sweet desserts should be discouraged. The child is developing his lifelong eating habits, for which reason it is basic that he learn to enjoy sound foods.◀

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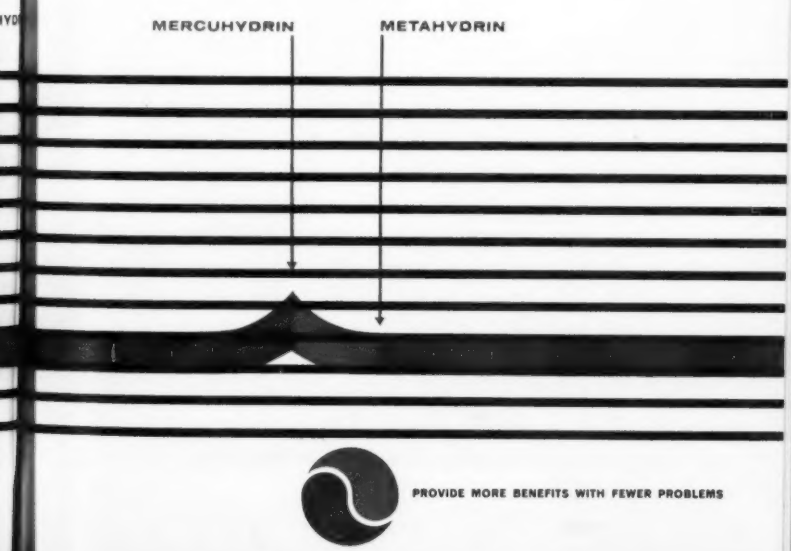

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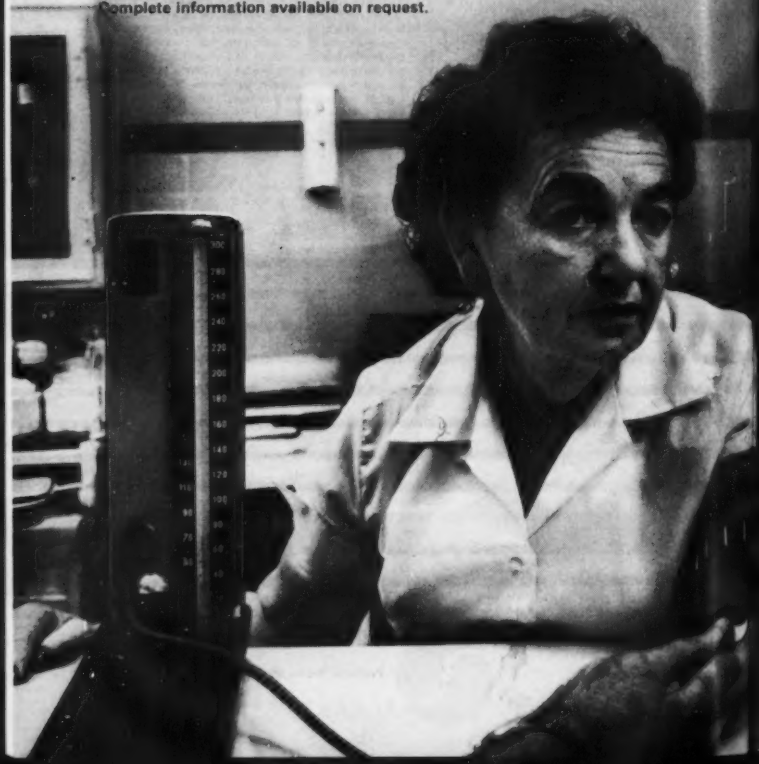
*Coan, J. P., McAlpine, J. C., and Boone, J. A.: J. South Carolina M. A. 51:417 (Dec.) 1955. /RESONC

Complete information available on request.



original article

Facial Dermatitis Venenata: Two Unusual Cases

GEORGE E. MORRIS, M.D.,* *Boston, Massachusetts*

►*The possible causes of facial dermatitis are many and varied, requiring that the history be searching and the physician be alert and open-minded in taking it. When dermatitis recurs seasonally it may not be the allergen that is seasonal, but the patient's opportunity for contact with it.*◄

Two unique cases of dermatitis venenata of the face are presented to focus attention on the importance of getting thorough searching case histories and of being flexible in interpreting them. Diagnosis was difficult in the first case, obvious in the second.

Case 1

A woman first seen in 1953 stated that she had had an eruption of the face and neck intermittently for three years. It started in November of 1950 and lasted five days at that time. The second year it again commenced in November but lasted until May. The third year it started in the late fall and again remained until May.

When seen October 28, 1953, she had had a rash for four weeks. The eyelids, the face, and the exposed parts of the neck were red, slightly swollen and scaling. There was some thickening of the skin of the back of the neck and of the chin. She had previously been told to avoid hair-wave solutions and rinses, to use "non-allergic" cosmetics, and to try synthetic detergents in place of soap. She was tested with hair-wave solution, wool, and rayon. All of these tests were negative. She was judged to have a contact dermatitis and was given cold compresses to apply. She was seen over a period of six weeks, and was discharged as cleared.

A year later the patient stated that her eruption had appeared again four weeks previously, and that she had not been able to clear it. The eyelids and neck were red and swollen. Tests with rayon, feathers, and certain fall flowers (i.e., a gardenia, a begonia, and a chrysanthemum) were negative.

She then volunteered the information that her rash had broken out each year after she had gone to the attic to get the winter clothes out for her family. She was accordingly tested with dust from the attic, which looked like soot. When this was left on for 48 hours she had a four-plus reaction, the reaction site showing large confluent blisters. She was advised not to go to the attic again, and since avoiding the attic has had no recurrence of the eruption.

Comment

Though it is well known that

* Member of the Committee on Occupational Dermatoses of the Council on Industrial Health of the American Medical Association.

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For complete information, consult package insert or write to Professional Service Dept., Squibb, 745 Fifth Ave., New York 22, N. Y.

REFERENCE: 1. Goodman, L. S. and Gilman, A.: *The Pharmacological Basis of Therapeutics, Second Edition*, New York, Macmillan, 1955, p. 163.

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easonal facial dermatitis frequently occurs as a result of contact with pollens from trees, grass, weeds and the like, apparently no dermatitis resulting from seasonal contact with dust in an attic has previously been reported. A patch test with the insulation material of the attic was suggestively positive, but not nearly as positive as her reaction to the attic dust. No single factor in the dust which would cause her rash could be isolated.

Case 2

This woman was seen in February 1959 with a rash on the face of five days' duration. She stated that she had been well until eight days prior to her visit when because of a cold she had started to wear a hygienic mask to avoid infecting her infant. After 48 hours of such use she had noticed redness and watering of the area covered by the mask and had applied a household remedy without success.

Figure 1
Dermatitis from Hygienic Mask.

On examination, the chin, the adjacent parts of the cheeks, and the area immediately contiguous to the nose showed a bilateral symmetrical redness with moisture and scaling. The lips and lower parts of the face were slightly swollen. The rash was sharply outlined to the area covered by the mask (Fig. 1).

A patch test with the mask, after it had been thoroughly cleaned, was positive after 24 hours, with redness and vesicles. The patient was given cold saline compresses and riboflavin by mouth, and was told not to use the mask. In three weeks' time the eruption was entirely cleared.◀

Management of Labor Pain

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Simeckova, M., et al., *Obst. & Gynec.*, 16:119-123,1960.

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The Case for Rear Facing Seats in Commercial Aircraft

HORACE E. CAMPBELL, M.D, *Denver, Colorado*

Military experience shows that 75 per cent of serious injuries in take-off and landing crashes could have been prevented if passengers had been in rear facing seats. Although commercial airlines fear customers would object, surveys of military passengers showed that only 3 per cent disliked this arrangement.

The advantages of having airplane seats face to the rear became apparent during World War II, when personnel in military aircraft (chiefly bombers) experienced many forced landings. Usual "ditching procedure" was for those not at the controls to sit on the floor, facing the rear, with backs and hips against a bulkhead and a pad of some sort behind the head. Rationale for this position was that a greater area of contact and therefore a greater reduction of impact force per square inch was achieved than with a forward facing position.

Deceleration Force

Investigations using rear facing seats and seat belts of various widths show that the force per unit area on restrained body mass increases quite rapidly as area of application decreases. The force on seats and seat belts when a 150-pound individual exerts eight gravitational units of pressure in a sudden stop[1] is shown in Table 1.

Thus, it requires 13.8g to produce a force of 10 pounds per square inch in a back facing seat, 4g to produce the same force on a 3-inch lap belt, and only 2.7g for a 2-inch lap belt. Currently, forward facing seats are used in commercial passenger planes, relying upon the belts for deceleration control. With rear facing seats, the belt reverts to its original function, i.e., keeping the passenger in the chair in rough weather.

Military Experience

Military aircraft in the United

1. Fryer, D. I., Air Ministry Flying Personnel Research Comm. Report, FPRC 1055, 1958.

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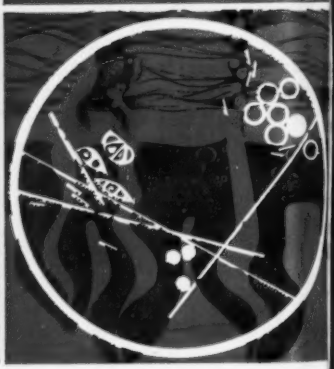

(1) Fox, H. H.: Antibiot. Med. & Clin. Therapy 6:85, 1959. (2) Lubowe, I. I.: Antibiot. Med. & Clin. Therapy 4:81, 1957. (3) Murphy, J. C.: Rocky Mountain M. J. 55:53 (June) 1958. (4) Pace, B. F.: Med. Rec. & Ann. 57:370, 1957.

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TABLE 1

FORCE PER UNIT AREA ON RESTRAINED BODY MASS
(150 LBS. AT 8G)

	AREA OF APPLICATION	LOADS IN LBS./SQ. IN.
2-inch lap belt	40 sq. in.	30
3-inch lap belt	60 sq. in.	20
Rear facing seat	208 sq. in.	5.77

tates, Canada, and Great Brit-n are equipped with rear fac-g seats for all passengers. Brit-h[2] experience prior to the time hen rear facing seats were in-alled showed that 44.9 per cent passengers were killed or seri-sly injured in crashes, while ly 10.9 per cent of passengers ere killed or seriously injured crashes after rear facing seats ere in use. Since these figures ere based on crashes listed as ircraft destroyed," they may said to provide unequivocal idence of the superior safety rear facing seats.

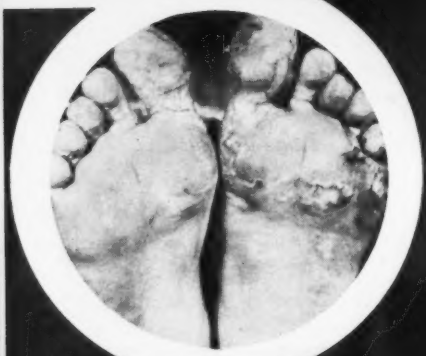
Experience of the United ates Military Air Transport rvice[3] has been similar. In all cidents involving its aircraft er a two-year period, the fa-lity rate was 11.1 per cent in rward facing and 1 per cent in ar facing seats; currently, all ilitary Air Transport aircraft are equipped with rear facing seats.

Appraisal of Commercial Airliner Crashes

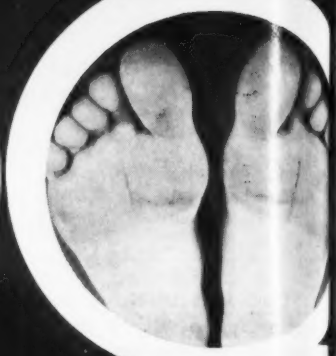
Assuming the more conservative British figure (three out of four passengers saved by rear facing seats) it is postulated that 60 of the 79 persons killed in the nine "survivable" commercial airliner crashes* in the United States, 1954 to 1957, might have survived, and that 40 of the 54 seriously injured might have had only minor injuries if they had been in rear facing seats. Crashes in which the decelerative forces were slight and deaths due solely to fire were not considered. Compared to the 30,000 persons who die and the 1,500,000 who are injured each year in automobile accidents, this seems to involve very few persons. To the families concerned, however,

Gronow, D. C. G., Air Ministry Flying Personnel Research Comm. Report, FPRC 807a, 1954.
Moseley, H. G., Directorate of Flight Safety Research, U. S. Air Force, 1957.

*Berlin, N.H., Nov. 11, 1954; Springfield, Mo., March 20, 1955; Chicago, July 17, 1955; Jacksonville, Dec. 21, 1955; Owensboro, Feb. 17, 1956; Pittsburgh, April 1, 1956; Seattle, April 2, 1956; Tulsa, Jan. 6, 1957; and New Bedford, Sept. 15, 1957.



Before GRIFULVIN.



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*Pardo-Castello, V.: A.M.A. Arch. Dermat. 81:772, 1960.

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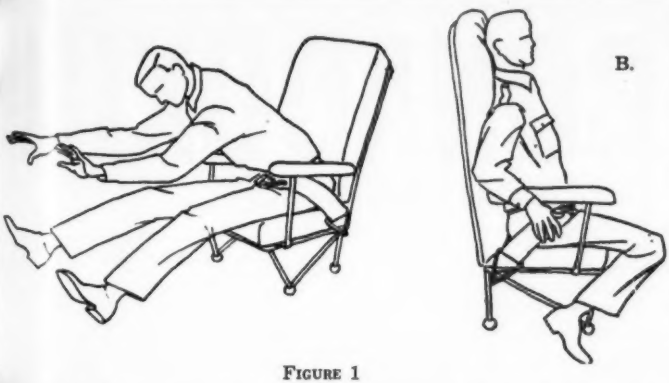

FIGURE 1

A. Crash forces concentrated on the belt area in forward facing position, but with lower center of gravity and shorter moment-arm. B. Wider application of crash forces in rear facing position with higher center of gravity and longer moment-arm about the seat-to-floor attachments.

hese aircraft fatalities seemed of he greatest importance.

Objections Often Voiced to Rear Facing Seats

The most pointed objection to he rear facing seat is that the rect posture places a more se- ere strain on the seat-to-floor ttachments than does the deeply exed position assumed in a rash in the forward facing posi- ion. Thus, with any given trength of seat-to-floor attach- ent, the forward facing seat is ore likely to remain attached the floor, if it is not struck by e passenger in the seat just ehind. In order to achieve their potential of safety,[4] forward facing seats must be spaced far enough apart so that each occupant has a clear swing forward over his seat belt. Any force exerted on the seat in front reduces by that much the safety of that seat.

There is evidence suggesting that the seats now being used in commercial aircraft are unnecessarily heavy, and that a rear facing seat with the stronger fittings which it requires can be designed to weigh less than the seats now in use. Even though the seats *might* weigh more, weight costs must be balanced against the 15 to 20 lives lost and the 10 to 15 passengers seriously injured each year. How-

. Pinkel, I. I., Am. Soc. Mech. Eng., New York, 1959.

taken at bedtime

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by treating the symptom—nausea and vomiting—as well as a possible specific cause—pyridoxine deficiency

each tiny Bonadoxin tablet contains:
Meclizine HCl (25 mg.) for antinauseant action
Pyridoxine HCl (50 mg.) for metabolic replacement.

usual dose: One tablet at bedtime; severe cases may require another tablet on arising.

supply: Bottles of 25 and 100 tablets. Bonadoxin also effectively relieves nausea and vomiting associated with: anesthesia, radiation sickness, Meniere's syndrome, labyrinthitis, and motion sickness. Also useful in postoperative nausea and vomiting.

Bibliography on request.

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ver, regardless of the direction which the seats face, injuries re severe when the seat tears ose.

Operators of commercial airnes fear also that customers will bject to riding backward in airlanes. Unpleasant inner ear balancing) disturbances are inuced in some by unusual visual timuli; however, these exist on while the plane is landing or aking off, and can be eliminated y closing the eyes during these ew minutes. A survey of 10,-00 passengers in military planes ith rear facing seats showed hat 65 per cent favored this seatng because of the view it prolded, the comfort of the ride, nd the absence of airsickness; 2 per cent said the direction of eating made no difference, and per cent disliked back facing eats.

A Tragic Case

A tragic and typical case in oint is the Eastern Air Lines' Electra crash in Boston Harbor October. While many of the etails are still obscure, prelimary reports stated that the pi-t, co-pilot, and two stewardses were survivors. It is sigficant that four of the five crew embers survived, and only sev-n of the 67 passengers. This was typical take-off crash.

On the author's one Electra ght, the stewardesses occupied on take-off and landing two small, folding, rear-facing, belt-equipped "jump-seats" installed on the aft wall of the galley compartment, the safest seats in the airplane.

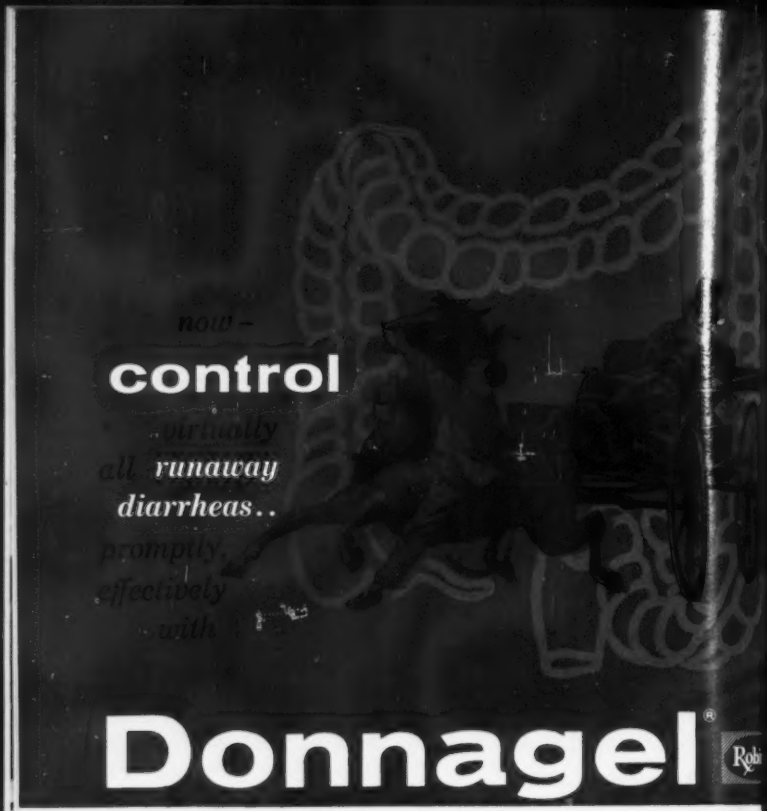
The fact that the pilot and co-pilot survived indicated that the crash was definitely survivable, since the crash forces are ordinarily most severe at the forward end of the fuselage. The newer airplanes are fitted with well-designed pilot chairs, strongly anchored to the floor, and equipped with belts, of course, and in addition, shoulder straps mounted on inertia reels.

Concerning the passengers, this over-water crash brings to light the usual circumstance, all or most of the seats tore loose from their fastenings (see photograph on page 27 of the October 17 issue of the weekly newsmagazine, TIME), permitting the occupants to receive fatal head injuries.

General Quesada and the FAA should issue regulations which will help prevent the deaths and injuries, even if they can not prevent the crashes.

Summary

In the experience of the Royal Air Force and the United States Military Air Transport Service, rear facing seats in aircraft provide a greater area of contact and therefore a greater reduc-



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DONNAGEL—PG
Basic formula, plus
Powdered opium, U.S.P.
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ion of impact force per square nch in crashes than do forward acing seats. The incidence of erious injuries and deaths was educed by 75 per cent or more after the installation of these seats in military planes, a finding which should not be ignored by operators of commercial airlines.◀

---

hysician's Responsibility o Epileptic Drivers

The physician should advise ileptic patients of the risk of izures while driving and of the nsequent danger to the patient, s passengers, and other users the highway. It would also be rmissible for the physician, unss specifically forbidden to do by the patient, to acquaint the tient's spouse or other memrs of the family with the danrs involved. In the case of a inor patient, such advice ould be given to the parents, hether or not the patient gives s consent. Failure to give such vice probably imposes no legal bility upon the physician for mages arising from an accint.

Physicians licensed to practice edicine in Wisconsin were rmerly required to report all ileptic patients to the local alth officer, who in turn reyed the information to the Mor Vehicle Department *via* the ate Board of Health. The real of this statute indicates at highway safety is being considered retarded rather than advanced by laws requiring physicians to initiate reports of epileptic patients to state agencies having control over the issuance and continuance of motor vehicle operators' licenses. Such laws dissuade many epileptic patients from seeking treatment and encourage them to keep their condition secret. Concealment, in turn, tends to increase rather than decrease the number of epileptic licensed drivers on the highways, and to decrease rather than increase the likelihood of their cure.

Existing Wisconsin law fixes upon the epileptic patient himself the duty to report his condition, and outlines a procedure whereby, in certain cases at least, he may have a temporary license renewable at 6-month intervals provided he submits to a periodic medical examination by a physician, who in turn certifies as to the patient's competency to drive.

Special Feature, *Wisconsin M.J.*, 59:48-49,1960.

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Anesthetic Cream in Allergic Pruritus

JONATHAN FORMAN, M.D., F.A.A.A.,* *Columbus, Ohio*

►*Combining two local anesthetics of low sensitization, one providing rapid action and the other prolonged action, makes this cream useful in pruritic skin disorders. Effective relief was provided in 95 per cent of cases, and the incidence of sensitivity reactions in 169 allergic patients was only 1.18 per cent.*◄

Despite the variety of topical anesthetic agents introduced since the discovery of cocaine, there remains need for a satisfactory non-toxic non-sensitizing completely effective antipruritic and analgesic agent. The incidence of sensitivity to local anesthetics has been reported to range from 10 to 40 per cent,[1] the "caine" or para-aminobenzoic acid esters being the principal offenders. It has been estimated that 40 to 50 per cent of cases of dermatitis venenata are due to medication and that between 10 and 20 per cent of these are due to local anesthetics.[2] Although there may be no history of previous exposure to local anesthetics, sensitization may have been produced by previous administration of some chemically related compound. PABA (para-aminobenzoic acid), a compound frequently administered with salicylates and corticosteroids, is an outstanding example of such a collateral sensitizer.

The infrequency of published reports of hypersensitivity reactions to local anesthetics is surprising in view of the frequency of occurrence. Nevertheless the physician should exercise great discretion in dispensing or prescribing local anesthetics and be constantly alert for the first sign of a skin reaction. Local reaction to a surface anesthetic agent may first appear only as redness and pruritus. With further application the inflammation may extend, accompanied by swelling, vesiculation, weeping, crusting and extreme discomfort. Patches may appear in parts of the body other than the site of applica-

*Emeritus Lecturer on Allergy, Ohio State University College of Medicine; Past President, American College of Allergists.

1. Gaul, L. E., *J.A.M.A.*, 157:721,1955.
2. Osborne, E., *J.A.M.A.*, 146:720,1951.

tion; occasionally generalized dermatitis results. Recovery is generally protracted.

A New Anesthetic Cream

This paper reports clinical experience with a new topical anesthetic preparation* introduced for evaluation of its therapeutic qualities and safety in actively allergic patients. The preparation is a cream containing 0.5 per cent each of pramoxine and diperodon hydrochlorides. The vehicle is a water miscible base adjusted to pH 4.5, previously found to be non-sensitizing in 268 allergic patients.[3] These two surface anesthetic agents are not of the "caine" type. Pramoxine contains a morpholino radical unique among clinically useful local anesthetics, and diperodon is a phenyl urethane derivative. Each of these compounds, previously presented as 1.0 per cent concentrations, has a history of relatively negligible sensitization. It was thought that the anesthesia produced by a combination of the more rapid action of pramoxine with the slower but unusually prolonged action of diperodon would be superior to that of either drug alone. This was confirmed in laboratory animals before the cream was submitted for clinical evaluation.

*Nescuta®, The Columbus Pharmacal Co., Columbus, Ohio.

3. Forman, J., *Ohio State M.J.*, 51:987,1955.

Preliminary Sensitivity Tests

A total of 169 actively allergic patients, several having histories of sensitivity to other local anesthetics, were patch-tested for sensitivity to this preparation. None of the patients with histories of sensitivity to other local anesthetics reacted to this new cream. Only 1 of 45 patients reacted to the first patch test, none of 40 given two tests reacted, only 1 of 80 given 3 reacted, and none of 30 reacted when challenged four weeks later. This incidence of sensitivity (1.18 per cent) is notably low when one considers that all of these patients were actively allergic. It is particularly significant when compared with the incidence of 10 to 40 per cent in unscreened patients which has been previously reported with local anesthetics in general.

One of the two patients who did react, exhibiting a plus reaction following the first application, was a housewife with a history of multiple allergies who was being treated for overtreated dermatitis after making the rounds of several physicians in the area. The sensitizing agents were found to be methyl and propyl parasepts, two agents that are widely used as preservatives in the drug and cosmetic industries and have a well documented history of hypoallergenicity. This appears to be the first time that

Trancopal ". . . is the most promising muscle relaxant presently available. Its outstanding characteristics are safety, excellent tolerance and potency."[1]

"From clinical examination of the patients, it was apparent that the combined effect of tranquilization and muscle relaxation enabled them to resume their normal duties in from twenty-four to forty-eight hours."[2]

"Chlormethazanone [Trancopal] not only relieved painful muscle spasm, but allowed the patients to resume their normal activities with no interference in performance of either manual or intellectual tasks."[3]

". . . patients were able to move with ease . . ."[4]

"The effect . . . was excellent and prompt . . ."[5]

"The patients [with torticollis] helped by the drug were able to carry the head in the normal position without pain."[6]

". . . Trancopal reduced restlessness and irritability in a number of patients. . . . Trancopal is exceptionally safe for clinical use."[7]

Dosage: Adults, 200 mg. orally three or four times daily; in some instances 100 mg. three or four times daily are sufficient. Relief of symptoms occurs in from fifteen to thirty minutes and lasts from four to six hours.

How Supplied: Trancopal Caplets®

200 mg. (green colored, scored), bottles of 100.
100 mg. (peach colored, scored), bottles of 100.

References: 1. Cohen, A. I.: *Current Therap. Res.* 2:374, Aug., 1960. 2. Kearney, R. D.: *Current Therap. Res.* 2:127, April, 1960. 3. Lichtman, A. L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 4. DeNyse, D. L.: *M. Times* 87:1512, Nov., 1959. 5. Mullin, W. G., and Epifano, L.: *Am. Pract. & Digest Treat.* 10:1743, Oct., 1959. 6. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 7. Gruenberg, F.: *Current Therap. Res.* 2:1, Jan., 1960.

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have been reported as allergens. The other patient who reacted, exhibiting a plus 3 reaction after the third application, was a schoolgirl with a diagnosis of vesiculating eruptions superimposed on psoriasis. The causative agent was not ascertained.

Clinical Trial

A wide variety of skin disorders were treated in 80 actively allergic patients by repeated applications of the cream. These patients included 30 males and 50 females ranging in age from 14 months to 80 years. Intense itching or burning characterized nearly all cases. Although practically all areas of the body were represented, lesions of the face or hands predominated.

Distribution of dermatologic disorders was as follows: 22 had dermatitis (plant, contact, allergic), 17 urticaria, 16 eczema (mainly atopic, some with lichenification), 8 erythematous rash (including drug reactions), 6 eczematoid eruption (mostly "housewife's hand"), 4 angioedema, 2 psoriasis, 3 pruritis of unknown origin, 1 pityriasis versicolor, and 1 vesiculating eruption superimposed on psoriasis.

The medication was applied directly to the lesion three or four times daily, or as needed to control itching or burning, for periods ranging from four days to three months and averaging th weeks. The anesthetic cream the sole agent employed in cases. In 6 cases desensitizati injections were given concurre ly. In 35 cases oral corticoster therapy was used in conjunct with or before the anesthe cream. In 5 cases oral antihis mines were given concomitant with the cream, and in 2 cases topical corticosteroid ointme was used along with it. The p tients were usually seen twice t first week, then once a we thereafter until the lesions h cleared or were under control.

Results

Response was judged satisfa tory to excellent in 76 patie (95 per cent), including 27 the 31 patients receiving no ot therapy. In 23 of these, cont of itching was followed by h ing of the lesions shortly the after without recourse to ot medication. In several ca where antihistamine or cortic teroid therapy had failed, the it ing was readily controlled by t anesthetic cream. It was observ that corticosteroids when us with the cream could usually b eliminated within three days.

The four failures, in which t cream was the sole agent us were a girl of 17 with seve eczema and chronic lichenifi tion who used the cream o

sprained wrist

Analgesics alone merely mask pain. New Medaprin adds Medrol* to suppress the inflammation that *causes* the pain and stiffness. Thus, to the direct relief of musculoskeletal pain,

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Each tablet contains:
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Acetylsalicylic Acid .....300 mg. (5 grs.)
Calcium Carbonate .....200 mg.

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sporadically, a boy of 11 with an erythematous rash due to aureomycin, a man of 58 with static eczema, and a woman of 54 with psoriasis.

In none of these 80 patients was any allergic reaction or undesirable side effect attributable to the anesthetic cream observed.

Summary and Conclusions

A topical cream combining pramoxine and diperodon hydrochlorides was found in a study of 80 patients to be a safe and effective surface anesthetic in the treatment of a wide variety of skin allergies and other dermal disorders characterized by pruritus.

In the majority of cases (95 per cent) its use was follow by prompt and effective cont of pruritus, and in many instanc by subsequent healing of lesio

This preparation alone suffic in about one third of cases, i cluding several where corticoste oid or antihistamine therapy h failed.

In the other cases it proved valuable adjunct to other me sures, particularly in conside ably shortening the period of co ticosteroid therapy.

No allergic reaction or to effect attributable to the prepa ation was observed in these patients, despite the fact that had allergic backgrounds a some were sensitive to other to ical anesthetics.◀

Ventricular Fibrillation: Treatment and Prevention by Electric Current

Ventricular tachycardia or fibrillation was terminated 532 times in 8 patients. Alternating current (60 cycle, 0.15 second, 150 to 450 volts) was applied to the unopened chest with large electrodes, handles being held by different persons and no one touching electrodes or patient. The initial shock was with 150 to 250 volts, successively larger voltages being used every few seconds if necessary. Successful defibrillation depends on identification of the arrhythmia a application of external coun shock within 4 minutes. This l itation can be met by card monitoring. External electric c diac stimulation at rates abo the basic idioventricular rate h been effective in preventing current ventricular arrhythmi Though it must be interrupted times because of pain and s ulceration, it has been appl for periods as long as 4 days.

Zoll, P. M., et al., *New England J. Med.* 105-112,1960.

rolotherapy in Low Back Pain from igament Relaxation and Bone Dystrophy

GEORGE STUART HACKETT, M.D., F.A.C.S.,*
Canton, Ohio

Chronic back pain is frequently used by weakness of ligament-to-ne attachments associated in a vi-us cycle with osteoporosis. Injec-ns given in order to rehabilitate e weld of ligament to bone have en successful in the treatment of 47 patients seen over a period of years.◀

Ligament relaxation was re-rted in 1953 to be a cause of ronic back pain and in 1958 relation to bone dystrophy as documented.[1] Conclusions ncerning this frequent cause of ck pain are founded on obser-tions made during the past 20 ars while diagnosing and suc-ssfully treating it in 1847 pa-nts. They are supported by x-y verification of osteoporosis d calcification, animal experi-nts,[1] a survey of the litera-re, and collaboration with au-thorities in the related fields of physiology, neurology, osteology, and glandular and vascular dys-crasias.[2-4]

Ligament-tendon relaxation accounts for many syndromes and causalgic and dystrophic states involving the spine, head, trunk and extremities that are characterized by pain and were formerly attributed to various radicular nerve impingements by bone, disk, adhesion or malfor-mation, or were regarded as bursal, arthritic or psychiatric states.

Etiology

In ligament relaxation the fi-bro-osseous attachments become weakened and incompetent by decalcification in osteoporosis and do not regain their normal strength following sprains. The

neritus Surgeon, Mercy Hospital, Canton, io.

Hackett, G. S., Ligament and Tendon Re-laxation Treated by Prolotherapy, Third Edition, Charles C Thomas, Springfield, Ill., 1958.

2. da Takats, G., & Miller, D. S., *Arch. Surg.*, 46:469-479,1943.
3. Wolff, H. G., Pain, Second Edition, Charles C Thomas, Springfield, Ill., 1958.
4. Wiggers, C. J., Physiology in Health and Disease, Fifth Edition, Lea & Febiger, Philadelphia, 1949.

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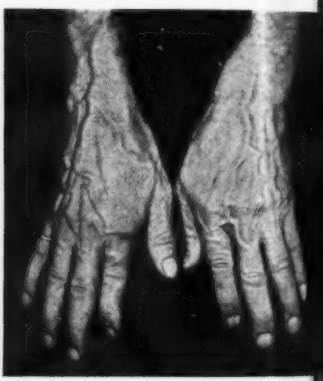

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FURACIN-HC Cream is available in tubes of 5 Gm. and 20 Gm. Fine vanishing cream base, water-soluble.

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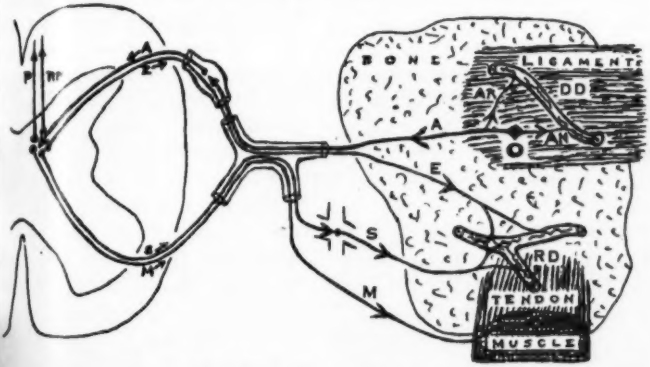
FIGURE 1

Cycle of Pain, Referred Pain and Decalcification.



Barrages of noxious impulses originate *O* in afferent somatic sensory nerve *A* when stretching of weak ligament fibers under normal tension stimulates non-stretchable nerve fibrils within fibro-osseous junction.

Barrages of afferent impulses *A* are transmitted to spinal cord and brain where they are interpreted as pain *P* and referred pain *RP*.

Direct decalcification *DD* in area of ligament attachment to bone results from neurovascular imbalance of bone metabolism caused by antidromic impulses transmitted directly *AN* and by axon reflex *AR* to periosteal and bone blood vessels.

Reflex decalcification *RD* results from impulses transmitted reflexly from spinal cord through efferent *E* and sympathetic *S* nerves to bone blood vessels.

Muscle spasm results from reflex motor impulses *M* as protective measure.

n arises when weak ligament
ers stretch under normal ten-
n and permit traction-stimu-
ion of the nonstretchable sen-
y nerve fibrils within the fi-
o-osseous attachments. Nox-
s barrages of sensory im-
ses having their origin in the
erent somatic sensory nerves
transmitted to the spinal cord
l brain where they are inter-
preted as pain and referred pain (Fig. 1).

Simultaneously, barrages of impulses from the same origin are transmitted in an antidromic direction,[2-4] directly and by axon reflex to bone blood vessels where they cause direct decalcification in the area of ligament attachment to bone by a neurovascular imbalance of bone me-

tabolism. Barrages of impulses are also transmitted reflexly by efferent and sympathetic nerves to bone blood vessels where they cause reflex decalcification in larger areas of bone. Thus the attachments of all ligament-tendon fibers in the decalcified area are weakened and give rise to additional barrages of impulses of pain, setting up a fibro-osteoporotic vicious cycle.

Muscle spasm results from reflex barrages of motor impulses as a protective mechanism. Osteoporosis of disuse (Fig. 2) is caused by a lack of stimuli to promote bone metabolism. It is impossible to dissociate ligament relaxation and osteoporosis, for either may precede and induce the other.

Diagnosis and Treatment

Ligament-tendon relaxation is diagnosed by trigger-point tenderness at the attachment to bone and is invariably confirmed by intraligamentous needling with a local anesthetic solution. Early osteoporosis is identified in x-rays by fading or disappearance of major trabeculae and by mottling of the bone margins as compared with the opposite side.[2] It may be visible in three weeks.[5]

Ligament-tendon relaxation is treated by prolotherapy,[1] a method of rehabilitation effecte by inducing proliferation of ne bone and fibrous tissue cel This is done by intraligamentou injection against bone of a mi ture of one part of a mild pr liferating solution* to three par of a local anesthetic solution. A proximately 13,000 patients this country[6] and abroad[7] ha been treated in this way, 82 p cent considering themselves pe manently cured to their satisfa tion. Our experience has inclu ed treatment of 1847 patien during a 20-year period.

Osteoporosis is treated[8] by combination† of estrogen, a drogen and vitamin C, togeth with thyroid 0.5 to 2.0 grai daily and vitamin B.

The patient should not enga in any activity that induces pa for pain is the alarm signal noxious impulses that cause teoporosis. When recalcificati by prolotherapy has streng ened the "weld" of ligament bone (Fig. 2) and pain is longer felt, exercises may gradually increased to stimula normal bone and soft tissue me tabolism.

Illustrative Case Report

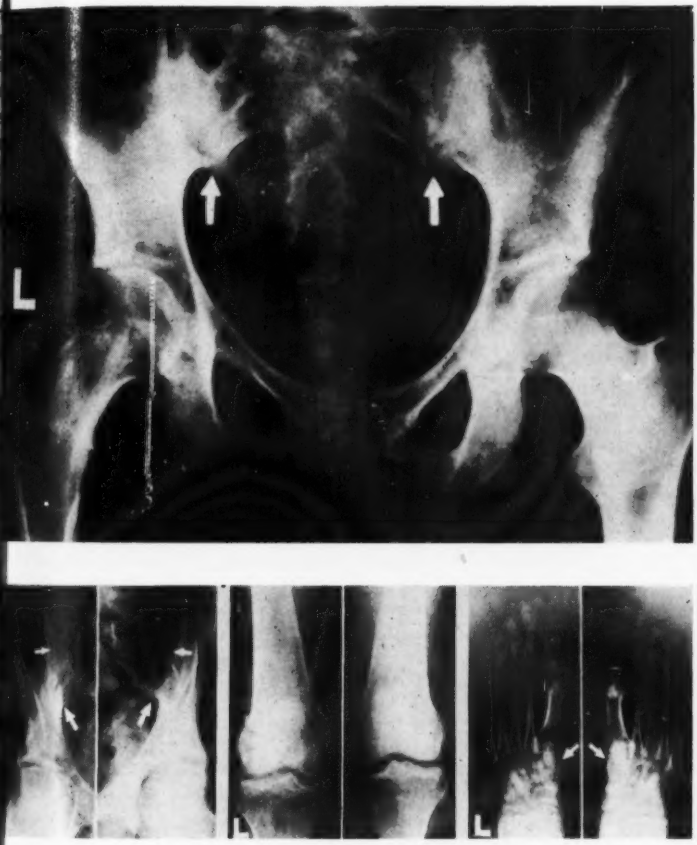
History: The patient, a healt

*Sylnasol®, G. D. Searle & Co., Chicago, Il
†Formatrix®, Ayerst Laboratories, New Yo N. Y.

5. De Lorimier, A. A., *Bull. Hosp. Joint Dis.*, 12:22-37,1951.
6. Compere, E. L., & Kernahan, W. T., *Clin. North America*, 42:299-307,1958.
7. Hvid, N., *Saertryk Ugesk. Laeger*, 121, side 619-622, Denmark, 1959.
8. Seidel, H., *Maryland M.J.*, 6:11-692,195

FIGURE 2

Results of Prolotherapy in Case Reported. Note Recalcification of Relaxed Sacroiliac Ligament and Gluteal Tendon Attachments to Osteoporotic Bone.



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references:
(1) Antos, R. J.: The Use of a New Dietary Product (Metrecal) For Weight Reduction, Southwestern Med. *40*:695-697 (Nov.) 1959. (2) Tullis, I. F.: Initial Experience with a Simple Weight Control Formula, to be published. (3) Roberts, H. J.: Effective Long-Term Weight Reduction—Experiences With Metrecal, to be published.

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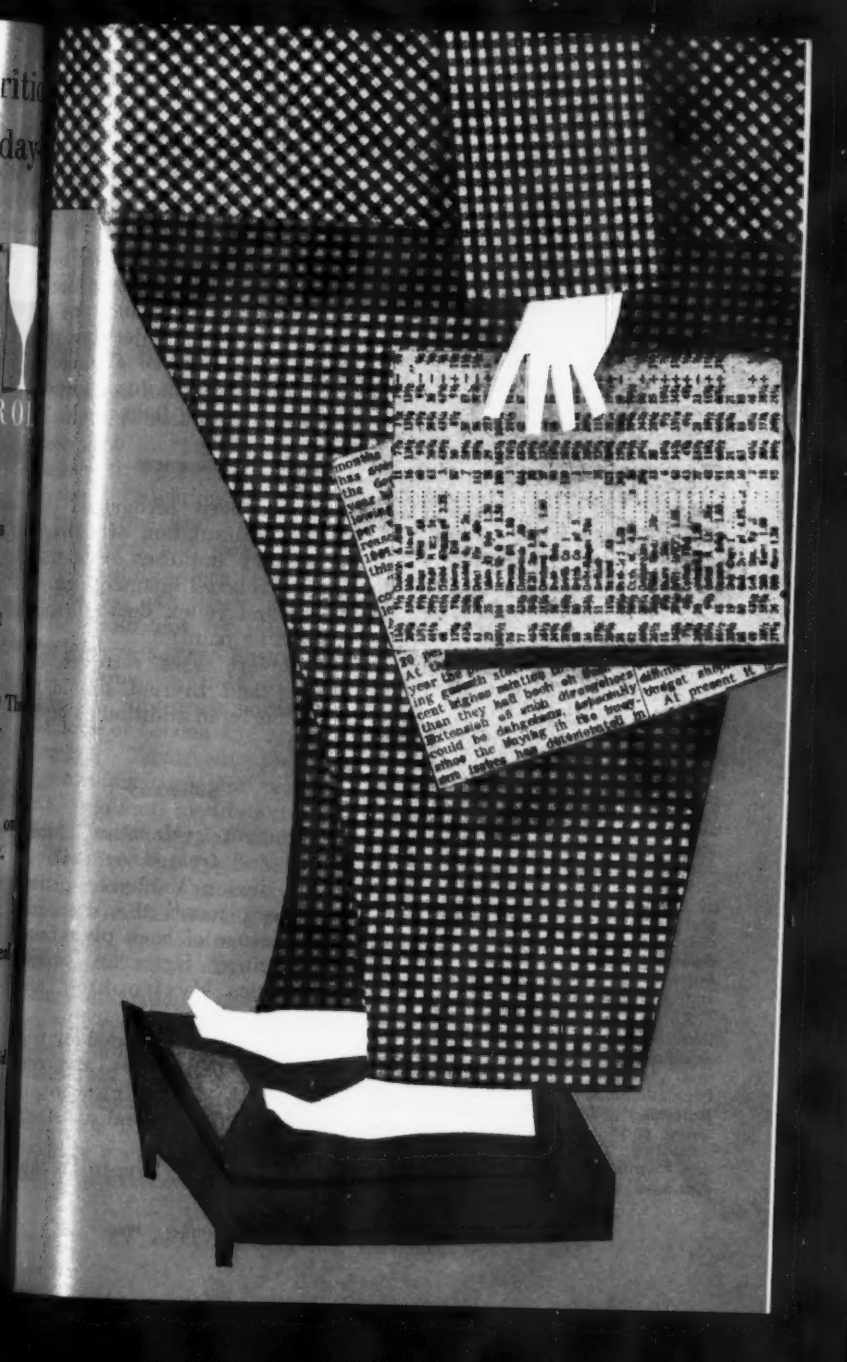

nurse of 23 (the loose-jointed, inadequate osteogenetic type) gave a history of injury of the left low back four months previous while lifting a patient. Though x-rays were negative, left sciatica had developed a month later while she was hospitalized in traction.

Examination: Walked with two assistants; list. Trigger-point tenderness of left sacroiliac ligaments confirmed by needling. Sciatica; left calf ½ inch reduction; reflexes normal.

Treatment and Progress: Prolotherapy of left sacroiliac, sacrospinus and sacrotuberus ligaments; analgesics; Camp-Hackett sacroiliac belt; crutches. Three weeks later local and sciatic pain had much improved, but fell on crutches sprained the (apparently decalcified) left iliolumbar, lumbosacral, interspinus (L-3-4-5) and hip ligaments and all the left gluteal tendons. After six weeks' observation these were also treated by prolotherapy.

X-rays taken three months later revealed decalcification of left ilium, ischium and femur but recalcification of left sacroiliac (treated) area. X-rays revealed increase of same.

Over a period of 12 months she received three to five prolotherapy treatments in each of lumbar interspinus (L-3-4-5), left ilio-lumbar, sacroiliac, sacrospinus and tuberus, and hip articular ligaments, and tendons throughout all left gluteal muscles. She was then free of all pelvic pain and tenderness, but was weak and unsteady from muscle degeneration and ligament/tendon relaxation associated with osteoporosis from left buttock to foot, and walking on crutches.

X-rays taken one month after the last treatment revealed abundant recalcification of left sacroiliac ligament and gluteal tendon attachments but decalcification from lumbar articular processes to foot on left side. She was using cane and gradually increasing activities. Two months later thyroid and a combination of estrogen, androgen and vitamin C were prescribed. She now swims, runs, dances, cli stairs, rides bicycle, is taking col graduate nurses' training, and is c fident of full recovery. X-rays re slight recalcification throughout.

If the sacroiliac joints had be bound early by the Camp-Hac ett sacroiliac belt and one two prolotherapy injections gi en she should have obtained permanent cure in 6 to 12 wee while continuing light work.

Comment

It has been recognized th noxious stimulation of barrag of sensory impulses from tra tion on relaxed ligaments caus direct and reflex decalcificatio as well as pain.

In severe cases, estrogen, an drogen and thyroid should b given early, in addition to prol therapy.

Summary

Ligament relaxation, dia nosed and treated in 1847 p tients during a 20-year perio has been found the most fr quent cause of back pain, bein the inciting factor in variou syndromes, dystrophies, an causalgic states.

Diagnosis is indicated by trig ger-point tenderness and con firmed by intraligamentous needling with a local anesthetic solution.

Treatment by prolotherapy

rengtl ens the weld of ligament bone by recalcification, elimi- ates the noxious barrages of im- ulses of pain and the osteoporo- s, and permits gradual increas- g of exercise to stimulate nor- mal bone metabolism.

Estrogen, androgen, vitamins B and C, and thyroid have been found to be increasingly beneficial in each decade of life after the second.◀

---

ear Gas Burns

Examination of a patient hos- italized 12 hours after he had een shot in the face at close ange with a pocket tear gas gun isclosed vesication and marked dema of the skin, with general- ed redness and swelling. The ight eyelids were extremely dematous and hard and the lobe could not be visualized. The left eye showed chemosis of he conjunctiva, mild injection f vessels, and gross normal ap- earance of cornea and anterior hamber. Treatment included igorous measures for relief of ain, frequent instillation of a teroid, and injection of hyalu- onidase into the upper lids. The eft eye cleared promptly, but lindness and increasing pain ne- essitated enucleation of the ight eye 57 days after injury.

Another patient, shot in the ace with a tear gas gun at a dis- ance of "about 1 foot," was hos- italized 44 hours later with se- ere chemical irritation about he muzzle of the face and burns nvolving conjunctivae and cor- neas. Improvement under treat- ment with narcotics and seda- tives, mydriasis, and frequent in- stillation of a steroid was slow but satisfactory, the patient be- ing released in 9 days, subjective complaints being reduced to se- vere photophobia and blurring of vision in the light by the 39th day, and there being no demon- strable evidence of damage at the end of 152 days.

Burns in these patients showed that tear gas, commonly regard- ed as temporarily incapacitating but harmless, can cause serious and destructive injury. The chemical generally used for mak- ing these weapons in this coun- try appears to be chloracetophe- none. Although sodium sulfite in glycerin and water has been re- commended as a specific, its trial in an earlier case caused such pain that it had to be discon- tinued. Ocular bandages are con- traindicated, castor oil and dark glasses being recommended in- stead. Vigorous therapy with a topical steroid, started as soon as possible, seems of great value.

Oaks, L. W., et al., *A.M.A. Arch. Ophth.*, 63: 698-706,1960.

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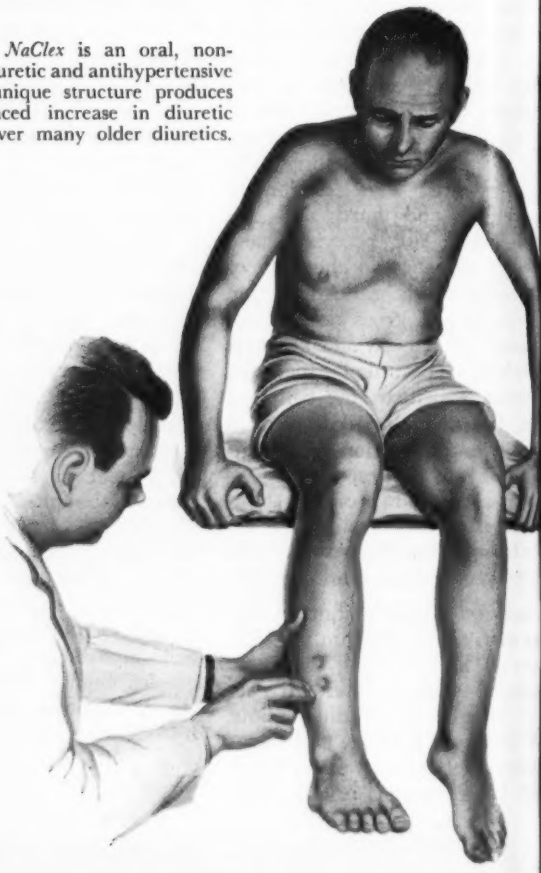

Cancer of the Prostate: Hormonal Therapy Versus Radical Excision

ROBERT LICH, JR., M.D.,* *Louisville, Kentucky*

►*Biopsy is invaluable in the early diagnosis of this condition. Radical surgery permits an approximate 50 per cent cure rate, whereas estrogenic therapy offers only palliation. Routine prostatic examinations should be made in all men over 45, and every nodule should be suspected and histologically examined.*◄

Cancer of the prostate is in many ways unique among the malignant tumors of the human. Its potential of devastation is inversely proportional to the age of the patient. And in the very aged its microscopic incidence is virtually universal, but by then the disease has been shorn of its lethality. Furthermore, hormonal control of this cancer can so exceed expectations that the unwary physician may wonder as to curability by hormones. However, cure is only the reward of radical prostatic surgery.

*Professor and Chairman of the Section on Urology, Department of Surgery, University of Louisville School of Medicine

*Read before the Sectional Meeting of the American College of Surgeons, held at Louisville, January 21, 1960.

Various Therapeutic Measures and Methods

It is my purpose to outline the place of surgery and the role of hormonal therapy in the treatment of prostatic cancer. Of isotopes it may be said that present-day isotope therapy in prostatic cancer has found a place somewhere between the results of radical surgery and palliative hormonal therapy, and its effectiveness is enhanced by the simultaneous exhibition of surgery, hormonal alteration, or both.

The cure of cancer of the prostate is attributed to radical surgery, but early diagnosis is the determining factor. Early diagnosis must be defined as diagnosis before the appearance of symptomatic prostatic enlargement. The prostate with a single discrete intra-capsular nodule is potentially curable by the removal of the prostate including its capsule and the seminal ve-

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Alvodine is ideal for *ambulatory* and *semiambulatory patients* who are in need of strong analgesia. Patients with cancer remain alert and can often carry on their normal daily activities when freed of pain by *oral* doses of Alvodine.

Dosage: Orally, from 25 to 50 mg. every four to six hours as required. By subcutaneous or intramuscular injection, from 10 to 20 mg. every four hours as required. *How Supplied:* Alvodine tablets, 50 mg., scored. Alvodine ampuls, 1 cc., containing 20 mg. per cc. *Narcotic Blank Required.* Write for Alvodine brochure containing detailed information on clinical experience, addiction liability, side effects and precautions.

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cles. There is some disagreement concerning the method of radical surgery; in my opinion the retropubic approach alone affords the advantage of unampered visual dissection of the seminal vesicles.

The key to success then is early diagnosis, and this can only be accomplished by an ever closer union between the physician and the urologist. To detect a nodule in the prostate requires rectal examination since symptoms do not exist, nor will they exist until the disease becomes both inoperable and incurable. When the nodule is found by palpation, the patient must be studied further. The nodule must be histologically differentiated from fibrosis and prostatic calculous disease. This requires a prostatic biopsy.

Value of the Biopsy

Biopsy may be accomplished by either a surgical perineal exposure of the prostate, though few have advocated a transrectal route, or the removal of suspicious tissue percutaneously. Each has its merits and demerits. The perineal exposure creates a wound and with the disturbance of the perineal nerves it is not without risk of potential impotence: the accuracy of the needle has been repeatedly questioned. There is no universal answer except to be sure that it is cancer before one undertakes a radical prostatectomy with its resultant impotence. To find later that the suspicious gland was but the aftermath of prostatic infection with fibrosis may place the well-meaning physician in a vulnerable position.

Biopsy Technique

If a needle is used it must be with studied patience and under anesthesia to gain perineal muscle relaxation. Above all the needle must retrieve with unfailing precision the tissue toward which it is aimed. Without this accuracy it is no more useful than an erratic gun and equally as dangerous. We have employed our slightly changed Franklin modification of the Vim-Silverman needle for several years, with outstanding success. This modification only reduced the prong length beyond the needle point to afford rigidity, accuracy and larger biopsy specimen.

Radical Surgery

If the nodule in the movable non-fixed prostate is found carcinomatous on histological study the therapeutic path is clear. A radical prostatectomy should be performed with or without orchiectomy, depending upon the temperament and training of the urologist modified only by the egoism of the patient. Morbidity

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References: 1. Personal Communication to Eaton Laboratories, 1959. 2. Spencer, J. T., in Conn, H. F.: Current Therapy 1954, Philadelphia, W. B. Saunders Co., 1954, p. 130.

*antibiotic-resistant staphylococci

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f this procedure should be no reater than that of a conservative prostatectomy, the mortality istinctly less than 5 per cent, nd an anticipated cure of 50 per ent. At first glance this does not ppear to be a very high cure ate, but when one considers that he 10-year life expectancy for nales of this age group is but 53 er cent, it materially alters the pparent effectiveness of radical rostatectomy. On the other and, the carcinomatous prostate ausing symptoms is usually inurable.

Relief and Palliation

If the prostate is fixed in the elvis, the cancer has extended o, behind and beyond the semial vesicles, and usually the pelic and lumbar spine may have een invaded. Palliation and ymptomatic relief is here our nly opportunity. The patient ay have urinary retention of a ariable degree and he may be uffering pain from bone invaion. If urinary retention is arked or complete it may be ecessary to remove some of the nvading prostatic tissue per rethreum. Or, if the urinary bstruction is not great the conomitant reduction in size of the rostate with hormonal therapy ay relieve the patient of these bstructive symptoms as well as is bone pain. The almost immeiate comfort that mnny of these patients experience is often startling, as well as most gratifying, to both patient and physician.

Hormonal Influence Is Temporary

During this period of alleviation afforded by anti-androgenic therapy, the metastatic tumor and particularly the primary growth may show histologically much destruction. Unfortunately, this period of hormonal influence on the growth economy is not permanent and after a variable period the tumor achieves independence of hormonal influences, and tumor progression occurs in spite of androgen deprivation. This phenomenon of hormonal independence was demonstrated after it was found that, after eight generations, prostatic carcinoma transplanted into laboratory animals retained its autonomy, and was independent of both androgenic and estrogenic influence.[1] And still, in spite of this change in biochemical influence, the cancer cell did not change morphologically. These studies would suggest that the cancer cell is autonomous from the outset, that its lethal activity is but interrupted for a variable period, until it can make the necessary metabolic adjustments to continue its predetermined course. It is this work that explains the reason for the inability of hormonal therapy to effect a

1. Deming, C. L., *J. Urol.*, 61:281,1949.

misca

A "localized capillary syndrome, associated with hemorrhage... actually serves to signal the threat of abortion."[1]

Correction of abnormal capillary fragility "decreases the possibility of retroplacental hemorrhage, or enhances the efficacy of established therapeutic regimes."[4]

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references: 1. Taylor, F. A.: West. J. Surg., & Gynec. 64:280, 1956. 2. Ainslie, W. H. & Gynec. 13:185, 1959. 3. Pearse, H. A. Trisler, J. D.: Clin. Med. 4:1081, 1957. 4. blatt, H. B.: Obstet. & Gynec. 2:530, 1953.

permanent cure of prostatic cancer.

Estrogens Plus Castration?

The much discussed question as to whether estrogenic therapy should be combined with castration at the time of diagnosis of prostatic cancer has not been answered to the satisfaction of all. A study of 818 cases by the American Urosurgical Society[2] for a five-year period yielded some interesting statistics. Prior to the use of estrogen 9 per cent of the patients survived for 5 years, as compared to 18 per cent when estrogenic therapy was used alone. On the other hand, if castration was used alone the 5-year survivals rose to 26 per cent, and if both castration and estrogen were employed the 5-year survival rose to 36 per cent. It was further brought to light that if the acid phosphatase of the blood was normal at the time of diagnosis the number of patients surviving for 5 years was 62 per cent, as compared to 36 per cent survival in the group in which acid phosphatase was found elevated.

Estrogens Now and Castration Later?

The urologists who advocate estrogenic therapy alone until its effectiveness is lost, reserve orchiectomy as a means of providing an additional period of fair comfort for the patient. Survival may not be as long, but it is felt that the total period of patient comfort is extended.

Inoperable Cancer

Another therapeutic dispute is whether or not the patient found with asymptomatic inoperable cancer of the prostate should be promptly placed on estrogen, or orchiectomized, or both. There are those who feel that, since estrogenic or reduced androgenic effect is but for a variable period it should be reserved until such time as symptoms develop referable to the prostate or to metastases. As to all of these points it is difficult, if not impossible, to arrive at a definite answer. Only through a continued observation lies the solution and even then the picture may be clouded by variables, or at least difficulties of measurement and evaluation.

Other Measures

In view of the inevitable ultimate failure of estrogenic therapy and orchiectomy, other measures have been investigated in an effort to extend palliation. Adrenalectomy and hypophysectomy were clinically disappointing and did not afford the relief anticipated by inhibiting the production of adrenocorticotropic hormone. A clinically sim-

2. Huggins, C., & Hodges, C. V., *J. Urol.*, 1: 293,1941.

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ilar response accompanied the use of cortisone provided at least 100 mg. was used daily since a lesser dosage did not lower the level of urinary "androgen" metabolites. Symptomatic relief may be experienced for a limited time, but there is no demonstrable change in the metastatic bony lesions.[3]

3. Kirkland, K., Modern Trends in Urology. Edited by E. W. Riches, Paul B. Hoeber, Inc., 1953.

Summary

The problem of conquerin prostatic carcinoma rests upo early diagnosis which can onl be accomplished by routine pr static examinations in men b yond the age of 45 years. Ever nodule must be regarded wit suspicion and subjected to hi tologic examination. Withou early accurate diagnosis we ar helpless in the effective trea ment of prostatic cancer.◀

Management of Cutaneous Hemangiomas in Infancy

These growths (also called strawberry nevus, strawberry hemangioma, or cavernous hemangioma) may be cutaneous, subcutaneous, or mixed. They usually appear at one or 2 weeks of age and grow rapidly for from 6 to 8 months.

In a 7-year study of 76 children with 92 strawberry nevi that were left untreated, growth always ceased by age 8 months and either no trace or merely a few flecks remained at 5 years, except in the case of very large tumors which required additional years for complete absorption. It was concluded that those which do not grow actively during infancy are not likely to retrogress on their own.

Application of dry ice, injection of sclerosing solutions, and ligation of the nutrient artery have been widely used. There no proof that these methods a superior to no treatment at al Excisional surgery has been em ployed at times, but no one h considered it a reasonable ro tine procedure.

No mode of treating this t mor has been demonstrated improve its ultimate prognos Exposure to ionizing radiatio during infancy apparently i creases the risk of acute leuk mia, thyroid cancer, and perha other malignant conditions in l er life. Measures (e.g., admini tration of antibiotics) should b taken to minimize irritation an prevent infection. If therapy required, an effort should b made to design studies to eval ate its efficacy.

Pinkel, D., *New York J. Med.*, 60:1461-1 1960.

Chymotrypsin Therapy of Bronchial Asthma

SAMUEL J. TAUB, M.D., F.A.C.P.,* *Chicago, Illinois*

Good to excellent response was obtained in 78 (88.6 per cent) of 88 children and adults treated. Respiratory discomfort was favorably influenced by the anti-inflammatory action of the agent, and liquefaction of thickened bronchial secretions occurred. No side effects were observed.

This chronic allergic disease, with its dyspnea, cough and wheezing, and the production of thick tenacious sputum, has among its many causes inhalants, pollens, molds, feathers, animal hair, foods and drugs. Endogenous infections caused by bacteria and viruses are frequent complications.

Administration of steroid drugs in the treatment of asthma is a very popular procedure. Results at first are quite dramatic; however, after continued usage, symptoms are prone to reappear and become more difficult to control.[1] Undesirable side effects occur with all steroids if their administration is continued long enough. Adrenal insufficiency and/or adrenal cortical atrophy are hazards, particularly on long-term therapy. Also, it becomes difficult to discontinue the steroid drugs because in many cases a dependency has been established and larger doses must be used in order to control symptoms.

Iodides have been used for many years to liquefy thickened tenacious sputum and to help the patient cough up bronchial plugs. Unfortunately, there are some patients who develop a sensitivity to iodides and so their continued use becomes hazardous.

Predicated on the mucolytic and anti-inflammatory properties of the proteolytic enzyme chymotrypsin, my interest has been focused on the merits of such therapy in bronchial asthma. The basis of the present clinical report is a group of patients treated with the enzyme chymo-

*Professor of Medicine and Chairman, Department of Allergic Diseases, Chicago Medical School.

1. Taub, S. J., et al., *J. Allergy*, 27:514-22, 1956.

TABLE 1

PARENTERAL THERAPY

NUMBER OF PATIENTS		IMPROVED (GOOD TO EXCELLENT)	NOT IMPROVED
Adults	28	24	4
Children	12	10	2
TOTALS	40	34	6

TABLE 2

ORAL THERAPY

NUMBER OF PATIENTS		IMPROVED (GOOD TO EXCELLENT)	NOT IMPROVED
Adults	36	33	3
Children	12	11	1
TOTALS	48	44	4

TABLE 3

COMBINED SUMMARY

NUMBER OF PATIENTS		IMPROVED (GOOD TO EXCELLENT)	NOT IMPROVED
Adults	64	57	7
Children	24	21	3
TOTALS	88	78	10

trypsin via either the parenteral or oral route.

Methods and Materials

Of the 88 patients treated in this series, 64 were adults and 24 were children, the youngest being 10 years. Either an aqueous solution of chymotrypsin* providing 5000 Armour units per cc., or an oral tablet† providing 50,000 Armour units of proteolytic activity per tablet was used in this study. The parenteral form was administered intramuscularly, the patients receiving 2 cc. (5000 A.U.), two or three times weekly. Those patients treated orally received two tablets four times daily. Both forms of therapy enabled the patients to bring up the mucus with great ease, thereby making breathing more comfortable. The results are summarized in Tables 1 to

*Chymar® *Aqueous*, Armour Pharmaceutical Company, Kankakee, Illinois.
†*Chymoral*™, Armour Pharmaceutical Company, Kankakee, Illinois.

Discussion and Conclusions

Of the 88 patients, 78 (88.6 per cent) showed clinical improvement, suggesting that chymotrypsin is a valuable aid in the liquefaction of thickened bronchial secretions, and that its anti-inflammatory action favorably influences respiratory discomfort.

The new oral enzyme tablets have great appeal because their efficacy parallels that of the injectable form, they are easy to administer, and few or no side effects occur, even on prolonged therapy. Although allergic sensitivity to the parenteral form was not encountered in the 40 patients treated, this possibility must be kept in mind, since one is injecting a protein material.

Finally, this management does not preclude the simultaneous testing of the patient to eliminate offending food allergens and/or hyposensitization to other allergens.

The use of corticoid drugs as a first choice of treatment is to be condemned, because of the hazard of adrenal insufficiency and/or adrenal cortical atrophy, particularly on prolonged therapy. It would be wise to return to more fundamental methods in the management of bronchial asthma.◀

Use of Promethazine as a Local Anesthetic

In 7 human volunteers the onset, degree, and duration of local anesthesia produced by subcutaneous injections of procaine and of promethazine were compared. The anesthetic effect of 2.5% promethazine roughly equaled that of 1% procaine. Promethazine, 1.5 to 2.5%, was used in 30 minor surgical interventions, in amounts of 0.5 to 2.0 cc. Satisfactory anesthesia was obtained in all cases when 2.5% solutions were used, including those requiring complete anesthesia. Patients sensitive to procaine tolerated promethazine well. No amounts larger than 2 cc. were given. A general sedative effect should be anticipated with larger doses.

Promethazine is a powerful local anesthetic, suitable particularly for patients with known or suspected sensitivity to drugs of the procaine group and for patients with a history of multiple drug intolerance. Injections must be given subcutaneously since intradermal application causes necrosis.

Kalz, F., & Fekete, Z., *Canad. M.A.J.*, 82:833-834,1960.

Use of Imipramine in the Control of Depressive States

ELSE B. KRIS, M.D.,* and DAVID GERST, M.D.,
New York, New York

►*This drug proved valuable in the treatment of 93 ambulatory patients who had been hospitalized for more severe psychotic symptoms. When depression was severe and suicidal tendencies were evident, action of the drug was not quick enough and use of electric shock therapy was recommended.*◄

Control of depressive states by treatment with imipramine† was evaluated in 93 patients (76 women and 17 men) who prior to admission to an outpatient clinic had been hospitalized in state mental institutions.

Group 1

After a period of satisfactory community adjustment, 17 women and five men showed symptoms of sudden recurrence of acute anxiety and depression. During their hospitalization, they had been diagnosed as having either manic-depressive psychosis, depressed type, or involutional psychosis of some type. In 40 per cent of these, symptoms were under good control within three to five weeks after institution of imipramine therapy, 75 and 150 mg. daily. Therapy was continued for several weeks after remission of symptoms. The following case history illustrates the results:

A man, aged 68, had been released from the hospital and had adjusted well in the community until two years later when his wife had become acutely ill. Although his wife recovered within a few weeks, he became increasingly depressed and complained of severe insomnia and anorexia. Imipramine was started immediately and within 10 days he was cheerful, his appetite had improved, and he no longer complained of being fatigued. The only persistent symptom was a mild insomnia. The addition of a mild tranquilizer at bedtime was well tolerated and resulted in control of the insomnia. Therapy was discontinued after 10 weeks and the patient has remained free of symptoms.

*Research Unit, New York State Department of Mental Hygiene, Aftercare Clinic, New York.

†*Tofranil*®, Geigy Pharmaceuticals, Ardsley, New Jersey.

Group 2

After being in the community for some time, 21 patients (19 women and two men) who had been diagnosed as schizophrenic began to show recurrence of symptoms. Of these, 46 per cent were brought under control following treatment with 50 to 75 mg. of imipramine daily. When the remaining cases showed no improvement, therapy was discontinued and intensive treatment with tranquilizing drugs gave good results.

Group 3

Immediately upon return to the community, 22 patients (17 women and five men) who had been diagnosed as schizophrenic showed constant anxiety and mild depression. They all seemed to be afraid of not being able to stay out of the hospital and showed difficulty in adjusting to the community and family life again. In an attempt to control symptoms and give these individuals a better start, imipramine (25 to 50 mg. daily) was given. Results were excellent in 64 per cent, with medication being gradually discontinued after a few weeks.

An illustrative case was that of a woman, aged 27, with three young children. When first seen after release from the hospital, she felt very uneasy and was afraid she would not be able to make a go of things. She felt that the duties of taking care of her household were too hard for her, and that she would not be able to re-establish a daily routine. The children made her very nervous and she was uneasy about asking her mother-in-law to continue assisting with the children. Imipramine, 50 mg. daily, was prescribed. Within a few weeks, this patient showed excellent adjustment and had completely taken over the care of her household and children.

Group 4

After their release from the hospital, 28 patients (23 women and five men) had returned to work but after a few days on the job, complained of being tired and concerned about being able to master the work. The addition of a morning dose of 25 to 50 mg. of imipramine to nighttime medication with a phenothiazine, which the patients received on a maintenance basis, enabled them to perform well at work without feeling undue fatigue. In most cases, imipramine was discontinued as soon as the patient had adjusted to the routine of his job.

Side Effects

No severe side effects were noted in these patients. Some reported dryness of the mouth and occasionally increased perspiration. In one case there was slight tremor of the hands and in two cases medication was discontinued because patients seemed acutely disturbed under this therapy.

Conclusions

The use of Tofranil, either alone or in combination with other tranquilizing drugs, proved valuable in treatment of ambulatory patients who had been hospitalized for more severe psychotic symptoms. However, where depression was severe and suicidal tendencies were shown, it was found that Tofranil was not quick enough in its effect and the use of electric shock therapy was recommended.◀

Mouth-to-Mask Resuscitation

Mouth-to-mouth resuscitation has been shown to be superior and better controlled than have been manual methods. The objections to this method are largely met by a mouth-to-mask technique. With this technique the first 300 cc. of air with which the victim is ventilated is atmospheric, since the operator previously inspired atmospheric air through the tube. Overinflation is prevented by a pressure relief valve, set for 24 mm. Hg. There is no rebreathing of the victim's air by the operator, since he rebreaths the last 300 cc. of his previously exhaled air mixed with atmospheric air coming through the inlet valve.

The volume of air entering and leaving the valve (one end of the valve being attached to a recording spirometer and the other to a gas-flow meter) is measured with use of variations of rate and depth of breathing and by addition of resistance to the spirometer. The operator's expired air is collected and the mean CO_2 and O_2 concentrations analyzed to determine the concentration of these gases the victim would receive.

Advantages of mouth-to-mask resuscitation are its simplicity, safety and efficiency. Contact with the victim is avoided, thus minimizing danger of infection. Significant hyperventilation by the operator is prevented by rebreathing the small portion of expired air remaining in the resuscitator tubing. The concentration of O_2 entering the victim's lungs is adequate, and that of CO_2 is low. An adapter placed on the inhalation inlet permits resuscitation with 100% O_2 from a demand or continuous flow system when O_2 is needed and available. This form of resuscitation is also useful as a short-term assister in the ventilation of subjects in respiratory distress.

Tomashefski, J. F., & Oliver, T. K. *J.A.M.A.*, 172:1888-1890,1960.

Use of Nicotinic Acid-Glycine Mixture in Treatment of Peripheral Vascular Diseases

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Both agents in the mixture contributed to relief of vasospastic symptoms including postphlebitic pain, cutis marmorata, and Raynaud-like changes in the 40 patients treated. Only eight failed to respond to therapy, and there were no untoward reactions of any consequence reported by this group.

Production of repeated episodes of maximum vasodilation of the limb vessels is one of the well accepted adjuncts in conservative management of many peripheral vascular disorders. The side reactions of sympathotic agents are well known, while papaverine compounds frequently cause gastrointestinal distress and are rather expensive.

Material and Methods

For the past six years, a mixture of nicotinic acid and glycine* has been used successfully in the treatment of peripheral vascular diseases in hospital outpatient departments and in private practice. Of 40 patients treated, 20 representative cases are summarized in Table 1. Peripheral arteriosclerosis obliterans was the diagnosis in 14. The other cases included one each of the following disorders: postphlebitic syndrome, leg ulcer due to venostasis, chronic thrombophlebitis, thrombo-angiitis obliterans, and an ulcer of the stump in a diabetic amputee due to infarction of the skin.

All patients were given a preparation containing 2.25 Gm. glycine and 225 mg. nicotinic acid per tablespoonful, orally 3 to 4 times daily, in an individual dosage range of 1 teaspoonful to 1 tablespoonful. In this series of 40 cases, none was followed for less than two months, and all were observed during or through a winter season when complaints are usually greatest.

*Veriliquid 59 Lakeside Laboratories, Inc., Milwaukee, Wisconsin.

TABLE 1

RESULTS OF TREATMENT WITH ORAL GLYCINE-NICOTINIC ACID IN PERIPHERAL VASCULAR DISEASES IN TWENTY PATIENTS

NUMBER OF PATIENTS	DIAGNOSIS	RESPONSE TO THERAPY	
		SATISFACTORY	UNSATISFACTORY
14	Arteriosclerosis obliterans	11	3
1	Leg ulcer due to venostasis		1
1	Chronic thrombophlebitis	1	
1	Diabetic amputee stump pain	1	
2	Postphlebitic syndrome	2	
1	Thrombo-angiitis obliterans	1	
20	TOTALS	16	4

Results

Thirty-two patients responded favorably, eight showing neither subjective nor objective improvement. Mensuration included comparative skin temperature studies and oscillometry in all patients, plethysmography being carried out in some. The most positive index of effectiveness was unsolicited favorable or apathetic comment of individual patients.

It was evident that both agents of the mixture contributed to the relief of vasospastic symptoms including postphlebitic pain, cutis marmorata, and Raynaud-like changes. The response of both venous and arterial lesions also reflected the success of repeated vasodilation.

Discussion

In the conservative treatment of peripheral vascular diseases, others[1] have found that glycine "is a definite adjunct to the conservative treatment of peripheral vascular insufficiency." Its effect is based primarily on the specific dynamic action of the protein moiety to increase heat and energy production in the body. This heat is dissipated in the extremities and in this manner peripheral blood flow is augmented.

Nicotinic acid, which has commonly been used in the treatment of peripheral vascular disease, causes peripheral vasodilation (especially in the head and neck regions) through local action on the vessel walls. It has a more selected action as a peripheral vasodilator than some of the other agents frequently used. However, stimulation of superficial vasodilation by nicotinic acid probably has no

1. Gustafson, J. R., et al., *Surgery*, 25: 1949.

portanc in relief of pain on am-
bulatio Glycine, which affects
superfic al and deeper vascular
channe , augments blood flow to
he mu cles of the limb and ap-
pears t produce relief of pain.

Summary

A mi ture of nicotinic acid and glycine was used in 40 patients with a variety of peripheral vascular disorders to effect repeated, prolonged episodes of dilation of vessels in the legs. Improvement was noted in 32 patients, eight showing no response. No untoward reactions of any consequence were noted.◀

Use of Trifluoperazine and Discharge Planning Procedures in Psychotic Patients

Patients who had not responded satisfactorily to other therapies, including reserpine, chlorpromazine, perphenazine, mepazine, hydrotherapy, and electroshock, were selected for a clinical trial of trifluoperazine (Stelazine). Of 51 patients, 20 had been hospitalized under 5 years, 15 for 5 to 9 years, and 16 for over 10 years. Ages ranged from 17 to 68 years, 33 being in the 30 to 40 group. The drug was given orally starting with 2 mg. 3 times daily for 3 days, then 5 mg. 3 times daily for 3 days, and finally 10 mg. 3 times daily until side effects appeared. For the first 3 days the patients continued medication they had been taking. EST was used in conjunction with trifluoperazine in 18 of the 51 patients, modified by 0.25 gm. of thiopental sodium (Pentothal) and an average dose of 60 mg. of succinylcholine chloride (Anectine), with 1/50 grain atropine one hour before treatment. A step-by-step procedure of activities and privileges was instituted for those who showed significant improvement, preparing them gradually for convalescent discharge and eventual release.

As a result of this therapy and proper discharge planning, 32 of the 51 patients were discharged, most of them on convalescent leave, committal papers remaining effective in case further treatment was necessary. Of the 51 treated, 29 showed maximum, 18 moderate, and 4 minimum improvement. Trifluoperazine proved to be a superior antipsychotic agent.

Spicer, E. R., & Gysin, W. M., *Nebraska M.J.*, 45:313-315,1960.

Propionyl Erythromycin Lauryl Sulfate in General Practice

EDWARD SETTEL, M.D.,* *Forest Hills, New York*

►*This preparation was tested in 102 patients suffering from a variety of acute and subacute infectious disorders. Compared with unmodified propionyl erythromycin, it gives somewhat more rapid control of infection and produces slightly fewer side effects. Adequate blood levels are quickly achieved.*◄

In the treatment of infective conditions in general practice it is not always possible to select an appropriate antibiotic on the basis of prior identification of the infecting organism. The impossibility of providing constant attendance on the patient also makes the usage of parenteral preparations and early detection of untoward reactions more difficult than under hospital conditions. Manifestly, any antibiotic considered for more or less routine use in general practice should be broad in its spectrum of action, orally effective, sufficiently potent that improvement is well established within 48 to 72 hours, and largely free of undesirable side actions.[1] It is the purpose of this report to record the clinical results obtained with propionyl erythromycin ester lauryl sulfate† in a cross-section of infectious disorders and to evaluate them against the background of these criteria.

Erythromycin is an antibiotic derived from the actinomycete *Streptomyces erythreus*. Its spectrum of activity is wide, embracing most gram-positive bacteria, a number of gram-negative bacilli, large viruses, Rickettsia, spirochetes, and some protozoa. The instability of erythromycin base in gastric juice, however, made it impractical to administer the drug by the oral route without the protection of an acid-resistant coating. In an effort to overcome this difficulty a number of esters were synthesized among which the propionyl ester

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†*Ilosone® Lauryl Sulfate*, Eli Lilly & Co., Indianapolis, Indiana.

1. Settel, E., *Antibiotic Med. & Clin. Therapy*, 7:193,1960.

ppeare l to hold particular romise This compound was ound t be of low toxicity[2] and o prod ce a significantly higher nd lon er-sustained plasma lev- l than erythromycin base when dminis ered orally.[3-11] In clin- al tri is propionyl erythromy- in wa found by a number of bserve s to be highly effective n a wide range of infec- ions.[1,4 ,11-14] Side effects were otably infrequent with the ex- eption that in one[14] gastroin- estinal intolerance was noted with so ne frequency in patients eceivin g doses exceeding 250 ng.

Despite the fact that propionyl erythromycin produces more effective plasma levels than the base it is nevertheless susceptible, like the base, to disintegration by gastric juice. Its better absorption has been explained on the basis that on release from the capsule within the stomach it is resistant to wetting until it reaches the alkaline medium of the intestine.[15] The use of the ester in suspension form, however, was still precluded by its liability to breakdown in gastric juice since such form necessarily involves wetting prior to ingestion. This particular difficulty appears to have been overcome by combining it with a strong acid, lauryl sulfuric acid, to form propionyl erythromycin lauryl sulfate which retains its potency even on prolonged exposure to gastric juice.[15] Following entry into the intestine the lauryl sulfate radical detaches and the dissociated propionyl erythromycin ester becomes available for absorption. Investigation of this modified form of the drug revealed that blood levels achieved with the patient in the fasting state are as high as those obtained in the non-fasting state.[15] This finding is noteworthy insofar as the blood levels achieved with either erythromycin base or unmodified propionyl erythromycin ester are distinctly lower when they are administered with food than when given in the fasting state.[16]

Pharmacologic study indicates that the toxicity of propionyl erythromycin lauryl sulfate is no greater than that of the un-

2. Lee, C. C., et al., Antibiotics Annual 1958-1959, Medical Encyclopedia Inc., New York, 1959, p. 354.
3. Stephens, V. C., & Conine, J. W., *ibid.*, p. 346.
4. Griffith, R. S., et al., *Antibiotics & Chemotherapy*, 5:609-1958.
5. Griffith, R. S., *op. cit.*, p. 364.
6. Perry, D. M., et al., *ibid.*, p. 375.
7. Kunin, C. M., et al., *ibid.*, p. 382.
8. Hirsch, H. A., et al., *New England J. Med.*, 260:408,1959.
9. Albright, J. G., & Hall, W. H., *Antibiotics & Chemotherapy*, 6:283,1959.
10. Perry, D. M., et al., *Antibiotics & Chemotherapy*, 6:347,1959.
11. Salitsky, S., et al., Antibiotics Annual 1959-1960, Medical Encyclopedia Inc., New York, 1960, p. 893.
12. Riley, H. D., Jr., et al., *ibid.*, p. 792.
13. Smith, I. M., & Soderstrom, W. H., *J.A.M.A.*, 170:184,1959.
14. Cronk, G. A., & Naumann, D. E., *Antibiotic Med. & Clin. Therapy*, 7:182,1960.
15. Stephens, V. C., et al., *J. Am. Pharm. Assoc.*, 48:620,1959.
16. Hirsch, H. A., & Finland, M., *Am. J.M. Sc.*, 237:693,1959.

TABLE 1

CLINICAL RESULTS IN 102 PATIENTS TREATED WITH PROPIONYL ERYTHROMYCIN LAURYL SULFATE

NATURE OF INFECTION	NUMBER OF PATIENTS	RESPONSE EFFECTIVE	RESPONSE UNSATISFACTORY
RESPIRATORY INFECTIONS:			
Acute follicular tonsillitis	25	25	0
Acute upper respiratory infection	18	18	0
Acute tracheobronchitis	11	10	1
Acute viral pneumonia	6	5	1
Acute cervical adenitis	5	5	0
Acute sinusitis	4	4	0
Acute bronchopneumonia	3	3	0
Acute nasopharyngitis	2	2	0
Acute otitis media	1	1	0
TOTAL	75	73	2
SOFT TISSUE:			
Acute furunculosis	8	8	0
Paronychia	3	3	0
Impetigo contagiosum	1	1	0
Cellulitis (human bite)	1	1	0
TOTAL	13	13	0
GENITOURINARY INFECTIONS:			
Acute pyelitis	3	3	0
Acute cystopyelitis	2	1	1
TOTAL	5	4	1
MISCELLANEOUS:			
Acute enteritis	5	4	1
Abscessed tooth	2	2	0
Acute diverticulitis	1	1	0
Acute suppurative conjunctivitis	1	1	0
TOTAL	9	8	1

modified ester[17] which experience has shown is one of the better-tolerated antibiotics. In the clinic the lauryl sulfate modification given in liquid form to infants and children has furnished very satisfactory blood levels,[11,12,18] with good tolerance and satisfactory clinical effects in the treatment of streptococcal and other infections.[12,18]

In view of these findings and previous experience with the modified erythromycin propionate,[1] a further study was instituted to determine whether the lauryl sulfate form holds any distinct advantage for use in general practice.

Method of Investigation

A total of 102 patients was subjected to study. Of these,

17. Anderson, R. C., et al., *J. Am. Pharm. A.*, 48:623,1959.
18. Reichelderfer, T. E., et al., Antibiotics Annual 1959-1960, Medical Encyclopedia Inc., New York, 1960, p. 899.

TABLE 2

BACTERIOLOGIC RESPONSE TO PROPIONYL ERYTHROMYCIN LAURYL SULFATE IN 93 CASES

INFECTING ORGANISM	NUMBER OF PATIENTS	NUMBER CURED BACTERIOLOGICALLY
RESPIRATORY INFECTIONS:		
Strep., hemolytic	22	22
Strep., non-hemolytic	18	17
Staph. aureus	11	11
Pneumococcus	1	1
Mixed gram-pos. and gram-neg.	10	10
Mixed viral (diagnosis by exclusion plus clin. findings)	10	9
TOTAL	72	70
SOFT TISSUE INFECTIONS:		
Staph. albus	8	8
Staph. aureus	3	3
Strep. hemolyticus	1	1
TOTAL	12	12
GENITOURINARY INFECTIONS:		
E. coli	8	2
Ps. aeruginosa	1	0
Staph. albus	1	1
TOTAL	4	3
MISCELLANEOUS INFECTIONS:		
Staph. albus	3	3
Shigella paradys.	1	1
Mixed viral	1	0
TOTAL	5	4

were inmates of a well-staffed geriatric facility with ample provision for constant observation, and 38 were drawn from a busy general practice in a large city. There were 56 women and 46 men, ranging in age from 42 to 91 years. All were suffering from acute or subacute infections representing a cross section of the types of infectious illness commonly encountered in geriatric and general practice. Patients for study were selected at random without regard to the nature of the infecting organism.

Dosage

All patients were treated with propionyl erythromycin lauryl sulfate in the form of pulvules of 250 mg., or flavored suspension containing 25 mg. per ml. The usual dosage was 250 mg. every six hours continued until the patient had been afebrile for at least 36 hours. There was no requirement of an empty stom-

ach for administration of medication.

Therapeutic Results

In assessing results clinical response was deemed effective only when temperature fell below 99° F. within 72 hours after therapy was initiated, and this fall was accompanied by clear-cut relief of other signs and symptoms of infection. All others were classified as unsatisfactory.

In general, the quantitive response (Table 1) was closely comparable to that previously reported for unmodified propionyl erythromycin.[1] It was noted, however, that with the lauryl sulfate modification defervescence and resolution of acute symptoms occurred generally within 18 to 36 hours, whereas with the unmodified propionyl ester similar improvement occurred after 24 to 28 hours. This somewhat accelerated action suggests that the lauryl sulfate form is either absorbed more rapidly or more consistently maintains a bacteriostatic plasma concentration, than does the unmodified propionyl erythromycin.

In 93 cases it was possible to make a bacteriologic diagnosis. By comparing the therapeutic results (Table 2) with those obtained with propionyl erythromycin[1] it becomes evident that the addition of the lauryl sulfate radical does not impair the broad spectrum of action of the parent antibiotic.

Side Effects

Side effects were infrequent and never severe enough to require discontinuance of therapy. Two patients manifested some mild abdominal cramps and nausea, and a third developed diarrhea on the third day of administration, after the temperature had been normal for 18 hours. No skin rashes or other allergic manifestations were noted. Although careful observation was maintained, no evidence of renal, hepatic, or hemopoietic damage was detected. The overall toxicity rate of less than 1 per cent represents a slight improvement over that of 4.8 per cent previously reported for propionyl erythromycin ester.[1]

Summary and Conclusions

1. The efficacy of propionyl erythromycin lauryl sulfate has been tested in 102 patients suffering from a variety of acute and subacute infectious disorders.

2. The clinical results indicate that the addition of the lauryl sulfate radical enables somewhat more rapid control of the infection than is possible with unmodified propionyl erythromycin. Toxicity is slightly reduced and the spectrum of action remains unimpaired.

3. Propionyl erythromycin lauryl sulfate holds a practical advantage over unmodified propionyl erythromycin in that adequate blood levels are achieved in either the fasting or non-fasting state.◀

New Dietary Regimen for Arthritis

This diet provides room temperature whole milk and warm soup (not creamed) as the only liquids permitted with meals, both being allowed at any time. Solids are permitted any time. Cod liver oil, mixed either with 1 oz. of fresh, strained orange juice or 1 oz. of cool milk, is taken on a fasting stomach at least four (preferably five or more) hours after the evening meal and before breakfast upon arising, and at least one-half hour after water intake. The cod liver oil-milk mixture is preferable to the orange juice mixture especially for advanced, sensitive arthritics. The mixtures are shaken well in a 2-oz. screw-top jar just before ingestion. There is complete exclusion of soft drinks, candy, cake, ice cream or any food containing white sugar. Water intake is restricted to a single portion taken one hour before breakfast.

The value of this dietary regimen was studied in a series of 98 arthritic or rheumatic patients. Over a period of six months 92 (93%) showed major clinical improvement, 89 (90%) favorable changes in blood chemistry. Blood sedimentation rates dropped consistently from averages of 20 to 30 (Wintrobe) to normals of 0 to 12 within a period of eight to 18 weeks. Sedimentation rates were erratic in 16 cases during an outbreak of Asian influenza and also in cases of common cold, during which times water and juices were taken freely throughout the day.

Intravascular agglutination is constantly found in arthritis, a comparison of the normal and arthritic patterns indicating that sludged blood resulting from positive intravascular agglutination may be an etiological factor in this disease. Cod liver oil taken on a fasting stomach reduces blood sludging and helps relieve symptoms. Objective and subjective findings suggest that adherence to the prescibed diet regimen on a long-term basis may result in sustained clinical improvement.

Brusch, C. A., & Johnson, E. T., *J. National M.A.*, 51:266-295, 1959.

Use of a Preanesthetic Medication in 100 Surgical Patients

PAUL F. NORA, M.D.,* RICHARD GROSSMAN, M.D.,* and ARKELL M. VAUGHN, M.D.,† *Chicago, Illinois*

►*A non-barbiturate preanesthetic was administered orally to 100 surgical patients having various diagnoses and subjected to different anesthetic techniques. Ease of induction was noted and postanesthetic recovery remained unhampered. Side effects were not noted, nor were there any allergenic phenomena.*◄

A non-barbiturate sedative, alpha-ethyl-alpha-phenyl-glutarimide,†† was evaluated as a preanesthetic medication in 100 consecutive surgical patients. This drug begins to act in 5 to 20 minutes after oral administration, and the duration of action is 4 to 6 hours.[1] There have been no reports of undesirable hematopoietic, hepatic, or renal effects following its use; side effects have been minimal.

It has been found to be a safe and satisfactory preoperative sedative for cystoscopy.[2] This drug has been reported to be an effective therapeutic agent in the preoperative sedation of 75 patients undergoing proctologic or general surgery.[3] It has been found to be a satisfactory preoperative sedative in 60 surgical patients in whom opiates were omitted entirely in the preoperative regimen.[4] With scopolamine, with or without meperidine, it has been found to be an effective and safe preoperative medication for children.[5]

Material and Method Employed

The sedative was administered to 100 consecutive surgical patients. The dosage was 0.5 Gm. orally, one hour and 15 minutes prior to the induction of anesthesia. Forty-five minutes prior to

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††*Doriden®*, Ciba Pharmaceutical Products, Inc., Summit, N. J.

1. Scharwachter, T., *Medizinische*, 50:1750, 1955.
2. Burros, H. M., & Borromeo, V. H. J., *Urol.*, 76:456,1956.
3. Hodge, J., et al., *Am. J. Surg.*, 94:108,19
4. Logan, K. M., *Clin. Med.*, 4:1221-1225,19
5. Branch, D. R., & Pastorello, R. R., *England J. Med.*, 257:125-127,1957.

TABLE 1

TYPES OF OPERATIVE PROCEDURES

SURGICAL PROCEDURE	NUMBER OF PATIENTS
Leg amputation	15
Hernia repair	30
Parcidectomy	1
Gastrostomy	2
Skin graft	5
Proctoscopy	2
Lumbar sympathectomy	15
Appendectomy	1
Lipectomy	1
Arterial graft	2
Colostomy closure	2
Gastric resection	5
Gastro-jejunostomy	3
Abdominal perineal resection	2
Left hemicolectomy	2
Colostomy (transverse)	2
Exploratory laparotomy	3
Hiatal hernia	1
Hemorrhoidectomy	6
TOTAL	100

induction meperidine hydrochloride and either atropine sulfate or scopolamine were administered. All of the patients were males from 12 to 80 years of age. They had all been given adequate examination and were considered to be safe risks for a definitive operative procedure.

A general anesthetic was administered to 28 patients; of these, 26 were given cyclopropane. Intravenous thiopentothal, supplemented by nitrous oxide, was given two patients; 2 per cent tetracaine hydrochloride, in a dosage range of 6 to 12 mg., was used for spinal anesthesia in 66 patients; caudal anesthesia with one per cent lidocaine hydrochloride was given to 3 patients; and one patient had local anesthesia with injection of one per cent procaine hydrochloride.

The most common operative procedures performed were inguinal herniorrhaphy, lumbar sympathectomy, and supracondylar leg amputation, as shown in Table 1.

Results

The sedative was evaluated in respect to two effects:

1. The state of mind of the pa-

TABLE 2

CONDITION OF PATIENTS ON ARRIVAL IN OPERATING ROOM

CATEGORY	NUMBER OF PATIENTS
Asleep	1
Drowsy	2
Awake but relaxed	5
Anxious	1
Obstreperous	2

tient on arrival in the operating room was noted, and the patients were classified in 5 categories, as shown in Table 2.

2. The ease of induction of anesthesia was compared with the usual induction in patients premedicated with barbiturates. In the patients receiving a general anesthetic, the amount of anesthetic agent required to achieve the proper plane of anesthesia was noted, also, any difficulties encountered, such as excitement, and laryngospasm, and so forth, during this period. When an anesthetic other than general was used, the mental status of the patient was noted both during instillation of the anesthetic agent and during the operative procedure.

Of the 28 patients receiving a general anesthetic four had a smoother induction, 22 had the same, and two had a less smooth induction than with other types of premedication. Of the 66 patients who had spinal anesthesia six had a better mental state, 57 had the same, and three had a less satisfactory state as compared with other preanesthetic medications. No significant difference in total anesthetic requirements was observed. Also the postoperative status was not significantly different with the non-barbiturate premedication than with barbiturate premedication. There was no evidence of any allergic phenomena that could be attributed to its use.

Summary

A non-barbiturate sedative was used as a preanesthetic agent in 100 consecutive patients undergoing various surgical procedures. No untoward side effects or sensitivity reactions were encountered.

The drug was found to produce a satisfactory tranquilizing effect on patients prior to surgery. The majority of patients were awake but relaxed when brought to the operating room.

Anesthesia was induced without difficulty in 89 per cent of the patients.◀

Sulfadimethoxine in Treatment of Acne and Other Pustular Dermatoses

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This sulfonamide, in dosages of 1.5 gm. daily for an average of two weeks, produced good results in two-thirds of patients with acne and folliculitis. No improvement was obtained in a small number of patients with eczematoid dermatitis, seborrheic dermatitis, and pustular rosacea.

As might be expected of a disease of such variety and complexity as acne vulgaris, no form of treatment has proved generally satisfactory.[1] Secondary infection, principally with Micrococcus pyogenes var. albus and aureus, is a frequent complication, much of the permanent skin damage resulting from this stage of the disease.[2] Most favorable results in the pustular phase are from the use of systemic and local medication in addition to dietetic and roentgen and ultraviolet light therapy. Vaccines, antibiotics, and sulfonamides have been and are still being investigated.

Because they are seldom implicated in development of bacterial resistance, some of the newer sulfonamides would seem to be preferred medication. One of these, sulfadimethoxine,* was reported to control acne and other dermatologic conditions in 80 per cent of 44 patients.[3] In a double blind study of 134 cases of acne vulgaris, sulfadimethoxine was effective in 55.97 per cent of patients, the drug and placebo equally effective in 16.42 per cent, and neither effective in 27.61 per cent.[4] These results encouraged further investigation of sulfadimethoxidine's usefulness in treatment of acne and other pustular dermatoses.

Material and Method

Sulfadimethoxine was admin-

1. Poirier, P., *Canad. M.A.J.*, 77:866,1957.
2. Robinson, M. M., *Antibiotics Annual*, 1957-1958, p. 451.

*Madribon®, Hoffmann-La Roche Inc., Nutley, New Jersey.

3. Levy, S. W., *Ann. New York Acad. Sc.*, 82: 80,1959.
4. Cahn, M. M., & Levy, E. J., *Ann. New York Acad. Sc.*, 82:84,1959.

istered to 40 patients, aged 14 to 75, with a variety of pustular dermatoses: 26 had acne vulgaris, nine folliculitis, one folliculitis and furunculosis, one infectious eczematoid dermatitis, two seborrheic dermatitis, and two pustular rosacea. The duration of illness ranged from three weeks to 13 years; more than half of the conditions had been present for one year or longer.

All but four patients had received one or more topical medications prior to present treatment, and 12 had failed to respond to previous autovaccines or antibiotics. Concurrent therapy employed in most cases included vitamin A, ultraviolet radiation, cortisone preparations, sulfur lotions or other topical ointments or creams, and fat-restricted diets.

The dosage of sulfadimethoxine was one 0.5 gm. tablet daily, and length of treatment varied from three to 30 days, the majority of patients receiving the drug for a period of two weeks.

Results

Improvement of 50 to 75 per cent was noted in nine patients and 75 per cent or better in 15, improvement rate for the group being 59 per cent of 41 cases (one patient is counted twice because of improvement, recurrence in six months, and then greater improvement). No improvement was obtained in five patients with infectious eczematoid dermatitis, seborrheic dermatitis, and pustular rosacea. Thus if the figures are limited to acne and folliculitis, or to acne alone, good results were observed in two-thirds of the patients, counting as failures the six who could not be followed. Except for one report of indigestion that may or may not have been due to the drug, no adverse reactions occurred in any of the patients.

Discussion

Where adjuvant therapies are employed, as they must be in most skin conditions, it is of course impossible to state exactly what degree the basic medication is responsible for whatever favorable results are obtained, or even that any one aspect of the regimen is in itself basic. Nevertheless, a two-thirds improvement rate in acne with the use of sulfadimethoxine will be recognized as a worth-while achievement. The rate may have been somewhat higher because six patients (three with acne) were not followed. Further, previous systemic medication with one or more local adjuvants had failed in 12 patients: autovaccine two, tetracycline six, chlortetracycline hydrochloride one, erythromycin one, tetracycline

osphate and chloramphenicol e. O sulfadimethoxine, only o of these failed to respond, e showing an improvement of per ent or better.

An added advantage of acne erapy with this drug is that no se of photosensitivity to the ug has occurred either with tural sunlight or concomitant travi let light therapy.[5]

Summary and Conclusions

1. Of 40 patients (one given wo courses of therapy) receiving sulfadimethoxine 0.5 gm. ily for an average of two weeks for pustular dermatoses, 24 improved, 11 failed to improve, and there was no follow-up in six.

2. One complaint of indigestion may have been attributable to the drug. There were no other side effects or adverse reactions.

3. While the indications in this series were not sufficiently diverse to permit a broad dermatologic generalization, judging from the two-thirds improvement rate in acne vulgaris and folliculitis, it would appear that sulfadimethoxine is an effective systemic agent in the control of these two disorders.◀

[5] Cahn, M. M., & Levy, E. J., *Clin. Med.*, In press.

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angrene Due to Therapeutic ose of Ergotamine

Contraindications to administration of liquid ergot or ergotamine tartrate include peripheral vascular disease, hypertension, coronary disease, pregnancy, hyrotoxicoses, gross spesis, hepatic and renal disease, and anemia. Serious ergotism in a patient of 45 who received normally accepted therapeutic doses of ergotamine and who had none of the known contraindications is reported. Symptoms included vomiting, severe cramplike pains in all 4 limbs, coldness, general malaise, and an extremely red face. She had taken a total of seven 1 mg. tablets of ergotamine tartrate in 3 days to relieve menorrhagia. Her legs and feet became gangrenous on the sixth day and her thumb and index finger (right hand) on the tenth day. She was transferred for amputation on the sixteenth day. Spasm of the limb vessels had been so severe that no vasodilator drugs could reach the affected sites.

Cameron, E. A., & French, E. B., *Brit. M.J.*, 2:28-30,1960.

Dichlorisone Therapy in Corticoid-Responsive Dermatoses

M. MURRAY NIERMAN, M.D.,* *Calumet City, Illinois*

►*Following applications three or four times daily, this produced favorable responses in the majority of 1097 patients with dermatoses generally responsive to topical corticosteroid treatment. The only side effect observed was excessive drying in five patients, or in 0.46 per cent of those treated.*◄

Dichlorisone,† a new corticosteroid, differs significantly from previous adrenocortical steroids in that it is the first such drug which has proved effective on topical application but which has no clinically significant activity following systemic administration. When dichlorisone was given orally, in daily dosages ranging from 60 to 200 mg., to patients who previously had been on maintenance therapy with various systemic corticosteroids, relapses occurred in all instances.[1] Thus, dichlorisone may be the first "external" stero i.e., a steroid with primarily to cal activity.

Materials and Methods

Dichlorisone was used, in s eral forms,* in 1097 patie with a variety of dermato generally responsive to tre ment with topical corticosteroi Different conditions treated w various dichlorisone prepa tions included contact derm tis, seborrheic dermatitis of face, rosacea, acute inflamm tory acne vulgaris, psoriasis the face, impetigo, herpes ter, nummular eczema, post-d mabrasion inflammation, dyshidrosis.

Patients were instructed apply dichlorisone three or f

*Department of Dermatology, Chicago Medical School.

†*Diloderm*,® Schering Corporation, Bloomfield, New Jersey.

1. Hawkins, G. K., Personal communication.

*Dichlorisone Foam Aerosol, 18.75 m gm. container; Dichlorisone Cream, 0. Dichlorisone Aerosol, 8.33 mg./50 gm. tainer; Dichlorisone with Neomycin A 18.75 mg. dichlorisone and 37.5 mg. mycin sulfate/10 gm. container; Dich sone with Neomycin Cream 0.25%; and chlorisone with Neomycin Aerosol, 8.33 dichlorisone and 16.6 mg. neomycin fate/50 gm. container.

es daily. Dichlorisone was the ly medication given, except in small number of extremely se- re cases requiring systemic rticosteroids, and in the acne oup of patients in whom a gimen combining dichlorisone ith keratolytic and drying ents was used. Patients with ne vulgaris were instructed to ply one of these keratolytic d drying agents until an in- mmatory reaction occurred; at t time, they were told to anse the affected area with a nd soap and to apply dichlori- ne foam aerosol. Those with ute inflammatory acne vulgaris re initially treated with di- lorisone foam applied follow- cleansing with a bland soap. a number of cases keratolytic eparations were employed af- dichlorisone therapy had hieved a good improvement of e inflammatory reaction; in se patients the keratolytic ents were then applied on the n pretreated with dichlori- ne. Patients with pustular acne re given dichlorisone with omycin foam.

The patients with impetigo re instructed to apply dichlo- one following removal of the usts with boric acid com- esses.

Results

Response to dichlorisone therapy was good in all of the 1097 patients with conditions generally responsive to topical corticosteroid therapy; that is, in the majority of cases the therapeutic results were as good as those expected with available topical steroids, while in some cases they were superior. The most striking feature of dichlorisone appears to be the almost total absence of local irritation, even with the forms containing neomycin, where a certain degree of local sensitization might be expected. The only local irritation observed in this series consisted of excessive drying in five cases, an incidence of 0.46%. There were no systemic side effects and no clinical evidences of systemic activity of the drug.

The cosmetic elegance of the dichlorisone foam preparations is a definite advantage to patients whose occupations require them to have contact with others. The dichlorisone aerosol preparation proved highly effective particularly in exudative lesions with a tendency towards vesiculation, weeping and crusting; while the active ingredient exerts its anti-inflammatory effect, the spray acts as a drying agent in cases in which creams or ointments would favor vesiculation. The cooling effect of the freon included in the preparation afforded prompt relief of itching.

An interesting side observation was that dichlorisone with neomycin aerosol elicited particularly favorable results in patients with contact dermatitis due to deodorants. In these cases, the dichlorisone-neomycin combination provided the required anti-inflammatory and anti-infective effects, while the spray acted as a drying agent and thus helped avoid further irritation from perspiration. This afforded the patients a method of treatment which in addition to its therapeutic effectiveness had an aesthetic value. Many patients who could not tolerate deodorants asked to be continued on dichlorisone with neomycin aerosol therapy for deodorant and antiperspirant purposes after their contact dermatitis had cleared.

When used along with systemic treatment, dichlorisone aerosol therapy proved highly effective in herpes zoster patients. Definite signs of improvement were seen as early as 48 hours after institution of therapy. The use of this preparation, with its anti-inflammatory effect and the local cooling anesthetic effect of its vehicle (freon) appears to constitute a good therapeutic technique.

Comment

Dichlorisone, when properly used, appears to be as effective as or superior to topical preparations of hydrocortisone or prednisolone. The principal advantage of this new topical steroid is the almost complete absence of local irritation seen with its use.

The application of a topical steroid, alone or in conjunction with other measures such as systemic therapy, does not eliminate the necessity for removing the contactant in contact allergies or the offending allergen in other types of allergic dermatoses. In spite of the availability of highly effective antiallergic agents, the removal of the cause is to be preferred at all times to prolonged suppression by means of drug therapy.

Summary and Conclusions

1. Dichlorisone, a new topical corticosteroid, was given in various forms to 1097 patients with a wide variety of dermatologic conditions.

2. In the majority of cases dichlorisone produced results similar to those obtainable with topical prednisolone therapy, while eliciting a superior therapeutic response in some patients.

3. The virtual absence of local irritation (0.46% of cases) and complete lack of systemic side effects with dichlorisone is a feature of this drug.◀

Addison's Disease Complicated by Diabetes Mellitus

GEORGE P. McNICOL, M.D., *Glasgow, Scotland,* and
MARTIN W. McNICOL, M.D., *London, England*

Diabetes mellitus developed in a patient seven years after Addison's disease had been diagnosed. She has been maintained on 25 mg. of cortisone daily and approximately 30 units of insulin zinc suspension daily. Increased insulin sensitivity, characteristic of Addison's disease, was shown in this case.

The combination of Addison's disease and diabetes mellitus is rare; the total number of documented cases recorded in two recent reviews is 56. In 37 of these patients diabetes occurred first, in 13 Addison's disease, and in the remaining 6 the onsets were simultaneous.

The patient, 47, had normal health until 1950 when she noticed the gradual onset of weakness, loss of weight, loss of energy, and generalized pigmentation. Following a short acute illness, with shivering, vomiting and pains in the limbs she was admitted to hospital in a collapsed state. Pigmentation involving the palmar creases, the nipples, pressure areas, exposed areas, and the buccal mucosa was noted. A diagnosis of Addisonian crisis was made. She responded well to treatment with intravenous saline and cortisone. On leaving hospital she received a subcutaneous implantation of deoxycorticosterone acetate. Three years later, because of rising blood pressure, treatment was changed to oral cortisone.

Well until 7 years later, following a sore throat, she had increased thirst, polyuria, muscle cramps, blurring of vision and heartburn. Vomiting was frequent. Increase of cortisone dosage to 150 mg. daily was made; much of this was probably lost in the vomitus.

Diabetes Detected

In hospital 16 days later she was dehydrated and collapsed; pigmentation had persisted. No other clinical abnormalities were

detected. Diagnosis was Addisonian crisis; within 45 minutes of admission she was given an intravenous infusion of one pint of 5% dextrose in normal saline with 50 mg. of hydrocortisone hemisuccinate. Almost immediately blood pressure rose to 105/55. Blood sugar on admission was 680, after the infusion, 750, mg. per 100 ml. It seemed probable that the patient had developed diabetes mellitus. The initial clinical improvement was maintained and within a few days the patient declared herself restored to her normal health. Chest x-ray showed no abnormality and a straight film of the abdomen showed no suprarenal calcification.

The patient was stabilized on a 2200 calorie diet with 25 mg. of cortisone and 12 units of insulin zinc suspension daily. During convalescence she fell and sustained a simple Pott's fracture which required increased cortisone. When the fracture had healed she was discharged home, taking 25 mg. of cortisone and 16 units of insulin zinc daily. On two occasions of symptoms of hypoglycemia, blood sugar was high, i.e., 158 and 234 mg. per 100 ml. At home there was apparently continuous glycosuria, but no ketonuria, blood sugar 3 hours after breakfast 300 to 600 mg. per 100 ml.; insulin increased to 20 units zinc suspension daily, blood sugar fell to 2[illegible] to 300 mg.

The patient remained well f[illegible] six months when polyuria, lo[illegible] of energy, muscle weakness an[illegible] cramps developed. Heartbur[illegible] for 24 hours heralded a sudde[illegible] collapse. In hospital blood pre[illegible] sure was too low to be record[illegible] ed, remained very low and in[illegible] travenous noradrenaline was re[illegible] quired to maintain a systol[illegible] pressure of 100.

Medication and Dietary Control

Eventually she was again sta[illegible] bilized on 25 mg. cortisone. Al[illegible] though the diet had been re[illegible] duced to 1700 calories insuli[illegible] requirement was 30 units of zin[illegible] suspension daily; the dose ha[illegible] remained at 20 and 30 uni[illegible] daily, dose of cortisone consta[illegible] at 25 mg. daily. There have bee[illegible] two episodes in which cortison[illegible] dose has been increased on a[illegible] count of respiratory infectio[illegible] and in one of these there wa[illegible] moderate ketosis. Deoxycortico[illegible] sterone trimethylacetate ha[illegible] been given intramuscularly, [illegible] mg. at intervals of about s[illegible] weeks.

The diagnosis of Addison's di[illegible] ease was based on the clinica[illegible] picture of pigmentation wit[illegible] weight loss and asthenia which[illegible] responded promptly to steroi[illegible] therapy. This was supported b[illegible]

he results of laboratory tests: ow urinary 17-ketosteroids and bsent urinary 17-hydroxycorti-oids, before and after adrenal timulation with ACTH; there as no fall in the circulating osinophil levels after ACTH in-ection.

Particular importance is at-ached to the results obtained rom the water excretion test. When the patient received no teroid therapy only 22% of a ater load was excreted in 2 ours and only 47% in four ours, whereas when the test as repeated 2 hours after the ral administration of 25 mg. of ortisone, 39% of the load was xcreted in two hours and 75% n four hours. There was no de-nonstrable renal disease. If the ontrol of the diabetes is poor nd there is glycosuria, water xcretion tests may be rendered nvalid. In this case, therefore, nsulin dosage was adjusted at he times of the water tests to nsure that there was virtually o glycosuria.

The diabetes appeared 7 years fter the diagnosis of Addison's disease of fairly acute onset. Seventeen days after the patient first noticed thirst and polyuria, diabetic ketosis was severe. The diagnosis of diabetes was confirmed by the oral glucose tolerance tests which show an abnormal rise after glucose ingestion, with a much delayed fall in blood sugar levels, whether fasting levels were low or high.

Increased insulin sensitivity which is characteristic of Addison's disease is shown in the present case: profound hypoglycemia was produced by a very small intravenous dose of insulin (0.5 unit).

The patient shows a remarkable understanding of her disability and her therapeutic requirements; she increases her cortisone dose in the presence of infection (usually common colds and bronchitis). If necessary she also makes minor adjustments in her insulin dosage. There is no doubt that her intelligent cooperation is an important factor in maintaining her present state of well-being.◀

Scottish M.J., 5:30-36,1960.

Steroid Therapy in Systemic Infections

MONROE J. ROMANSKY, M.D., *Washington, D.C.*

►*While steroids have accomplished remissions in pneumonia, other acute febrile diseases, and infectious hepatitis, a high relapse rate belies symptomatic improvement. Steroid therapy is valuable in adrenal insufficiency and in meningococcic toxemia, but these drugs also depress antibody production.*◄

In patients with pneumonia, steroids can induce striking defervescence and symptomatic relief, with a decrease or disappearance of subjective and objective findings despite the persistence of pneumococci in the sputum, and blood, and, even the spread of pneumonia to other lobes with subsequent development of empyema. Steroid therapy used in patients with acute febrile illnesses has brought about rapid remission and reversal of the distressing clinical evidences of the illness. When the etiological agent could be demonstrated, as in bacterial pneumonia, typhoid, and subacute bacterial endocarditis, despite the remission of the clinical syndrome, evidence of increased multiplication or spread of the micro-organisms was frequently noted.

In infectious hepatitis, the use of steroids leads to rapid symptomatic improvement and a rapid fall in level of serum bilirubin. However, relapse occurred in 20% of the treated patients and not in controls. These hormones should not be employed in the average case but only for patients who are quite ill, especially those with marked anorexia.

Degree of Hazard Variable

The degree of hazard of infection in patients receiving corticosteroids is not easy to evaluate. These agents may so camouflage the appearance of septicemia that the infection may only be noted at autopsy. There have been instances in which steroids were used in patients with fever of unknown origin, with the assumption that an infection rather than tuberculosis was present, only to have rapid progression

of active tuberculosis, indicating that this diagnosis had been missed. The danger to a particular patient receiving steroids may also vary according to his basic status. Intercurrent infection is more likely to develop in persons with a debilitating type of illness who receive steroids than in those with a milder illness or with a chronic illness such as rheumatic fever, in which debilitation is not a prominent factor. There is a report of 12 fatal cases of chickenpox in children receiving steroids at the time of exposure to the disease.

Effects in Other Situations

That large doses of steroids depress resistance to infection has been proven by studies with bacterial, viral, fungal, protozoan, and even helminthic agents. Increasing the dose of steroids may overcome the effect of a given dose of a specific protective chemo-therapeutic agent. In typhoid and brucellosis, rapid defervescence follows the combined use of steroids and chemotherapy. No carefully controlled studies are available.

The value of steroid hormones in adrenal insufficiency is well established. The optimal dose of steroid is critical, and an excess is likely to be harmful. Objective means for determining the optimal dose clinically are not yet available. Adrenal insufficienc may result from severe sepsis, i the absence of Addison's disease Pretreatment with cortisone pr tects the adrenals from the dam aging effects of, e.g., diphtheri toxins, but does not protect fro the lethal action of the toxin. would appear that the damag caused by the toxin is so wide spread that protection of the ad renal gland alone is of little benefit. In meningococcic tox emia with collapse, the use o steroid and related compounds is generally recommended as part of therapy. Some emphasize the need for a pressor agent such as levarterenol along with the adrenal hormones and chemotherapy.

The protective effect of ster oids against bacterial endotoxi depends on increased blood lev els of steroids at the time o contact between endotoxin and susceptible tissues. Adrenal cor ticosteroids diminish the inflammatory response, regardless of the stimulus. The evidence indicates that the primary focus of steroid action is on vascular responsitivity. The effects of hypersensitivity reactions and similar tissue responses to immunologically active stimuli probably reflect the general anti-inflammatory effect of these steroids rather than a specific effect on purely immunological mechanisms. Steroids depress antibody pro-

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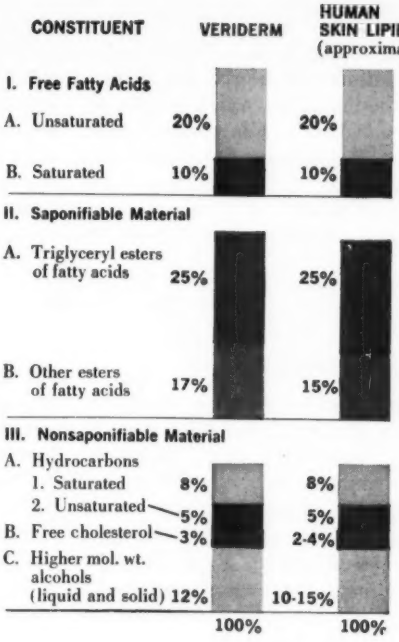
Neomycin Sulfate . . . . . 5 mg.
(equivalent to 3.5 mg. neomycin base
Methylparaben . . . . . 4 mg.
Butyl-p-hydroxybenzoate . . . . 3 mg.



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duction but do not alter the degradation rate of the performed antibodies. The exact status of steroids in the collateral management of infections requires much in the way of further controlled clinical study.

Reticuloendothelial function is disturbed by administration of the steroids and is manifested less in the initial response of the reticular cells to an injected load than in their capacity for recovery after such a dose has been administered.◀

J.A.M.A., 170:1179-1183,1959.

Lead Poisoning

Symptoms include metallic taste, nausea, persistent vomiting, abdominal pain, diarrhea, and malaise in the acute stage. Chronic exposure may cause avitaminosis, loss in weight, stomatitis, black gum line, severe colic, anemia, increase in reticulocytes, basophilic stippling, jaundice, coproporphyrins in urine, constipation alternating with diarrhea, possible hepatic, kidney, pulmonary, or central nervous system damage, mental aberration, arthralgia (especially at night), wrist or foot drop, encephalitis (especially in children, also occurring in adults poisoned with lead tetraethyl), peripheral neuritis, collapse, coma, and death.

In acute poisoning vomiting should be induced or gastric lavage used. Demulcents such as white of egg, cream, or milk should be administered and sodium sulfate, 15 gm. in ½ glass of warm water, may be given. An alkaline diet should be offered and calcium gluconate or lactate or sodium citrate administered intravenously, plus vitamin C. Symptomatic treatment plus supportive treatment for possible liver and kidney involvement is required.

Specific treatment of choice is calcium disodium versenate, 1 gm., in 250 to 500 ml. isotonic sodium chloride solution or 5% dextrose by intravenous drip over a period of one hour. Such doses may be administered twice daily for periods up to 5 days, interrupted for 10 days, and if necessary, an additional 5 days of treatment given. For children the dose of versenate should not exceed 0.5 gm. per 50 pounds of weight, given twice daily. Urine should be analyzed for lead to determine when it is normal.

Kaye, S., *Virginia M. Month.*, 87:31-32,1960

Rapidly Acting Thyroid Hormones and Their Cardiac Action

K. IBBERTSON, M.D., RUSSELL FRASER, M.D., and D. ALLDIS, M.B., *London, England*

Triiodothyronine and triac have been shown to provide more rapid restoration of thyroid function than other known agents. Basal metabolism and electrocardiogram tests show that oral doses produce maximal effects within 24 hours. Care should be taken in treating myxedematous patients so as not to induce angina.

Two synthesized thyroid hormones (triiodothyronine and triac) provide full thyroid replacement therapy for myxedema more rapidly than the main thyroid hormone L-thyroxine. Clinical investigators have claimed that small doses of triac can lower blood cholesterol without other equivalent thyroid effects. Triac might therefore have special clinical uses, both when the rapid restoration of thyroid function is desired (as in cases of myxedema coma) and also possibly for lowering blood cholesterol, e.g., in patients with coronary atheroma. Studies were undertaken to assess how soon triac acted and whether it did specifically lower plasma cholesterol.

Details of Administration

The large single dose of triac or triiodothyronine was given only to myxedematous subjects judged unlikely to have coronary artery disease with no clinical or ECG evidence of this disease, those under 40 years or who had only had a short period of myxedema, or those who had previously had full thyroid replacement therapy without disability. Of six patients, all showed the signs of complete thyroid failure, and two had hypopituitarism. The six observed for longer periods on various daily dosages of triac included two of these patients and four others with complete thyroid failure.

For the single-dose experiments, triac was given in oral doses of 18 and 12 mg. (3 times the full daily replacement dose),

and triiodothyronine in oral doses of 0.5 mg. (7 times the daily replacement dose).

Comparable Observations

With the scheme of sedation described below, comparable observations of six patients were made under basal conditions during 18 test days. With four patients three test days were observed—that of the placebo, of the triac, and of the triiodothyronine dose—usually in that order. With one patient the triiodothyronine day preceded the triac day. A further two patients received one or other of these drugs on a single test day. During each test day serial measurements of the B.M.R., ECG, plasma cholesterol, urine volume, creatine, and creatinines were made on all patients. Urine phosphate was determined in 1 patient. To permit comparison of the effect in the different patients, the metabolic effects measured were presented as a percentage of each patient's initial value for that test day.

Scheme of Sedation

The study of the changes in the B.M.R. within a 24-hour period was made possible by an extended use of the sedated B.M.R. procedure. Thus on a "test day" the patient was first sedated with sodium amylobarbitone 200 mg. given at 7 a.m. and 9 a.m. The test dose of the drug to be stud ied was given at 9 a.m. The pa tients were allowed to slee throughout the day, being wak ened to pass urine only after th two-hourly B.M.R. and ECG es timations. A further dose of sod um amylobarbitone was given i signs of rousing were observe during the day. Sips of wate were allowed throughout th day. On the morning followin each trial day the patients wer similarly sedated and, after a B.M.R. recording, were wakene at breakfast for oral doses o bemegride. By these means, re liable serial B.M.R. reading were obtained without incon venience to the patient.

Inferences from Results

Where there is no reason t suspect coronary ischemia, thes studies have indicated that con siderable restoration of thyroi function may be safely achieve within 24 hours by using tria or triiodothyronine. Optimal dos sage should probably be a loa ing dose of 12 to 18 mg. of tria followed by 4 to 6 mg. a day i three divided doses. Where ther is any history suggesting angin these rapidly acting thyroid hor mones should not be used. Fo subjects over age 40, or thos with ECG or other suggestion of cardiac abnormality, the in tial dosage of triac should no exceed 0.25 mg. a day, this ca

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Sherman Laboratories
Detroit 11, Michigan

1. Lehrer, H. W., et al.: Northwest Med. 75:1249, 1955.
2. Smith, Richard T.: New York Med. 8:16, 1952

tiously increased toward a full maintenance dosage over 10 or more days.

It is clear from these studies that single doses of either triac or triiodothyronine produce effects in four hours, maximal at 8 to 12 hours. Within 24 hours after each of these and maximally within at least 48 hours, there is an increased urinary volume increase in Na, Cl, N, P, creatine, and perhaps also Ca levels, and usually a rise in B.M.R. These early B.M.R. and other changes contrasted with those observed after single doses of thyroxine, when they have not been discerned for several days or been maximal till the tenth day.

Summary and Conclusions

After single oral doses of 12-18 mg. of triac and of 0.5 mg. of triiodothyronine, effects were observed in myxedematous subjects at as early as four hours and were maximal within 24 hours. These doses caused rises in sedated B.M.R., in the R wave of the ECG, in urinary creatine and phosphate, and a fall in pla ma cholesterol. Triac act slightly more rapidly than t iodothyronine, and its effe lasted seven to 10 days.

The daily administration triac in maintenance doses myxedematous subject gradually achieved a full effe within seven days. In small doses triac or triiodothyroni could induce a fall in plasma ch lesterol without apparent B.M or ECG effect. However, on co stant daily dosage, triac giv every 12 hours showed a low B.M.R. in the morning than the evening, or when given eve three hours.

Even small doses of triac cou rapidly induce angina in my edematous subjects who had gi en a history of angina, but tri may be the best thyroid hormo for treating subjects with my edematous coma who do not gi a history of angina.

An ECG may be taken eig hours after a dose of triac to co firm the diagnosis of hypoth roidism in young subjects.◀

Brit. M.J., 2:52-58,1959.

Pathogenesis of Cancer

Editorial, *Cancer Bulletin*

Cancer cells circulating in the blood stream are a potential source of metastatic growth, but their presence is not related to survival rates. Experiments indicate that regional lymph nodes may represent a barrier to disease spread, indicating that surgical removal may not be necessary.

In 50 to 60% of patients undergoing operation for tumors, tumor cells are demonstrable in blood draining from the tumor. Before tumor is discovered clinically cancer cells are probably circulating in the blood stream, but their demonstrable presence is not related to survival rates. If these cells are a potential source of metastatic growth, there exists a means of control in some patients.

Local trauma may be a possible factor in metastatic spread. In experiments conducted 40 years ago, an emulsion of tumor cells was injected into the peritoneum of mice. Cancer did not occur, but if a little glass rod was placed in the abdomen one week before injection, cancer developed at the site of injection. If silicate powder was placed in the abdomen, carcinomatosis also ensued. A suspension of tumor cells was injected into rats, and, two weeks later, laparotomy and liver massage were performed, definitely increasing metastases. A high-fat diet increased metastases, decreasing when the animal received a diet high in carbohydrates.

Records examined 20 years ago of children with bone sarcoma showed that of those for whom diagnosis was made at the first symptom and radical surgery performed without delay only 3% had pulmonary metastases, while over 30% of those refusing operation (or for whom local excision was done) developed pulmonary metastases. In these children tumor cells probably were already in circulation when the disease became evident clinically. Radical surgical therapy in these cases disturbed the host-tumor relationship,

while local removal decreased the incidence of circulating tumor cells, later operations consequently not having this effect.

Antigenic differences in spontaneous tumor and the host may be of the same type as those causing rejection of skin transplants. Circulating cancer cells in the blood may be homografts rejected because of the immunologic differences of the host. The first rejection of skin graft from an animal of one subline to a mouse of another subline occurred in 12 days, but the second graft to the same animal was rejected in six. If a regional lymph node was transplanted from the immunized animal to a second animal of the same strain, and a graft then made to the second animal, the graft rejection was found to occur in six days.

The transplantation of nodes other than the regional ones draining the site of the graft do not confer this "adoptive" immunity, so that the regional lymph nodes possibly represent a barrier to disease spread. If this hypothesis is substantiated, current indications for surgical removal of lymph nodes would have to be reappraised.◄

Cancer Bull., 5:90,1959.

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Arterial Occlusive Diseases of Lower Extremities

ELIE D. ABOULAFIA, M.D., and
ALLAN D. CALLOW, M.D., *Boston, Massachusetts*

►*Occlusions are usually due to thrombosis, emboli, or to trauma. Arteriography and aortography are important means of diagnosis and treatment of arterial diseases in general. Vasodilator drugs may be helpful, with proper foot care being the most important feature of non-operative management.*◄

Acute arterial occlusions are usually due to thrombosis in a previously diseased vessel, to emboli, or to trauma. In the lower extremities, unless promptly relieved, it results frequently in rapid onset of gangrene. Relief is rapidly achieved by arteriotomy and by removal of the clot. Any diseased arterial segment at the site of obstruction may be reconstructed. Search for the pathologic process responsible for the dislodged thrombus must be sought and treated. Excision of the involved segment with end-to-end anastomosis is the procedure of choice. If the defect is large, vascular graft is necessary. Excision of a diseased arterial segment and its replacement by graft in treating arteriosclerosis obliterans of the lower extremities is used less frequently now than in the past.

The surgical interruption of sympathetic nervous routes at their lumbar ganglionic chain is also performed much less often since the introduction of more direct methods. It retains its value in treatment of Raynaud's disease or some early cases of arteriosclerosis obliterans.

Arteriography and aortography have been responsible to a great extent for improving the means of diagnosis and treatment of arterial diseases in general, and of arteriosclerosis obliterans of the lower extremities in particular, yet both have been abused and misused. Wise conservative management in cases not curable by surgery will result in a decreased amputation rate and in an improvement of

symptoms or adjustment of the patient to them.

Vasodilator drugs may be helpful in pure vasospastic conditions and in some cases of thromboangiitis obliterans (Buerger's disease). In advanced peripheral arteriosclerosis obliterans, vasodilator drugs may decrease rather than increase blood flow to the extremities. Effects of vasodilator drugs may not appear for four to six weeks, for which reason it is important to observe the patient carefully during this period and to continue the drug only if adverse effects are not noted.

Proper foot care is probably the most important feature of non-operative management, e.g., keeping the feet warm, clean and free from any kind of local pressure. Complications must be aggressively treated as they arise and all unnecessary minor procedures (as paring of a callus) should be discouraged.

The amputation rate in patients never having smoked is as high as in those continuing to smoke, while the amputation rate is lower in smokers having stopped smoking. Although smoking should be discouraged in these patients, it may be resumed if no significant improvement results. Beverage alcohol may contribute to the well-being of the patient and relieve minor symptoms.◀

J. Maine M.A., 50:347-352,1959.

Procedure in Pediatric Surgery

H. W. CLATWORTHY, JR., M.D., *Columbus, Ohio*

►*Young infants withstand major surgical procedures well, since they are well hydrated and hypervolmic, in a good nutritional state, and have high levels of circulating corticoids. No elective surgery should be done in those three to 14 days old, since their ability to withstand trauma is considerably less.*◄

Congenital malformations in infants are usually single and remediable. During the first few hours the major anomalies incompatible with continued existence can be corrected with gratifying results, if diagnosed before complications have sapped vitality. Omphalocele, meningocele, massive teratoma and imperforate anus are readily recognized. Early recognition of occult lesions involving the respiratory and alimentary tract should also be a prime consideration of all professional personnel. An accurate diagnosis can usually be reached quickly by x-ray examination.

The younger the infant the less disturbing will be a major surgical procedure, since he is well hydrated and hypervolmic, is in an excellent nutritional state, has high levels of circulating corticoids, and has inherited antibodies enabling him to resist infection. He also possesses a high threshold for pain, thereby requiring less toxic anesthetic agents. If handled gently and skillfully, he will tolerate major surgery extremely well and recover rapidly. He also possesses the reserve to endure a prolonged convalescent period. In the three- to fourteen-day postpartum period, the infant's abilities to withstand trauma seem less, so that no elective surgery should be undertaken during this period. Although physicians may let a child "grow up until he is old enough to be operated on," there is little evidence for this, particularly if the growing up period is one of crippling morbidity and mortality of attrition.

Infants with congenital, indirect inguinal hernias should be

referred for radical surgery as soon as the hernia is diagnosed. The mortality in these instances is nil and the morbidity slight, and the risk of dangerous complications expected in 10 to 15% of such cases is largely eliminated. Umbilical hernia affects 15% of the white and 25% of the colored infants. Eighty per cent of all close spontaneously by age two and more than 95% by school age, so that it is proper to await developments with this condition.

Every hospital admitting infants for surgical procedures should provide clean, isolation-type facilities to protect the infant from his sick neighbors and from members of the hospital staff. Uninfected surgical infants should not be exposed to infected ones, and both require cautious conduct through the admitting office, and to and from the x-ray, operating and recovery suites.

The most effective way to avoid emotional disturbances in the child as well as in the family is to do as much elective surgery as possible in infancy, and to insist on adequate premedication before the induction of anesthesia. Cosmetic surgery should be performed before school age.

Minnesota Med., 42:710-713,1959.

Staphylococcal Infections in Obstetrical and Surgical Patients

ALFRED L. KENNAN, M.D., *Seattle, Washington*

Simple measures to lower the incidence of staphylococcal infections include discontinuing prophylactic use of antibiotics, administering combinations of antibiotics where sensitivity is known, meticulous preparation for surgery, sterilization of all hospital bedding, and use of the "no hands" dressing technique.

Study of factors causing infection of the breasts involved obtaining material from patients and from all personnel employed on the obstetric floor. During the study 117 live births occurred. No coagulase positive staphylococci were isolated from vaginal cultures taken from 99 mothers just after delivery. Fifty of the births were attended by an obstetrician who was a carrier, and although a number of these infants became colonized and infected, none had the strain carried by the obstetrician. Bedding of the mothers was never identified as a source of infection for the epidemic strain.

Ninety of the mothers were followed in the postpartum clinic. In 9, definite evidence of mastitis or breast abscess appeared, in one this being bilateral. Purulent material was obtained from the breast in four of these mothers. In each case the staphylococci isolated were resistant to penicillin, streptomycin, and tetracycline. The same strain was recovered from the breast milk in three other mothers. It was discovered that this was the strain producing an epidemic in the nursery. None of the mothers carried this strain on admission. All their infants were found to be colonized with the epidemic strain before it was isolated from any of the mothers, and eight of the infants had clinical staphylococcal infection before the onset of breast infection in the mothers. All nine of these mothers breast fed their infants. Among 19 mothers breast feeding infants colonized by a non-epidemic strain, and 67 mothers not nursing their infants, there

were no breast infections despite the fact that 34% of these infants were colonized with the strain. Of the mothers nursing infants colonized and infected by the epidemic strain, 40% in turn developed mastitis or breast abscess. The infants probably acquired the infection in the nursery from other infants and transmitted it during nursing.

Surgical infection with staphylococci is universally present in hospitals and cannot be entirely eliminated. Convergence of the surgical services in the operating area makes this a place where imprudent procedure has widespread effects. Litters, covered with blankets from the wards, remain in corridors frequented by physicians and personnel coming in close contact with them. Exhaust fans in the utility areas reinforce the normal circulation until at operating time an open petri dish containing agar will accumulate some 20 colonies an hour, half contaning the resistant bacteria. Face masks on carriers become contaminated with bacteria, these appearing on the exterior of the mask and soon circulating from there. It is now recommended that carriers
resistant strains change
masks every hour. There is
area in hospital environme
where infected personnel can
should be allowed.

Although the carrier effect
wound infection becomes le
clear as evidence accumulate
the situation is not hopeless a
simple measures will suffice. T
prophylactic use of antibiotic
should be discontinued, and the
apy with these agents used onl
where the sensitivity is know
Antibiotics should be used
combinations, effect of which
different from the expected fr
quency of double mutation
Wound infections should b
carefully segregated and iso
lated. Meticulous abdomina
preparation, atraumatic tech
niques, dry wounds, and carefu
closure reduce sepsis to a mi
imum. Hospital bedding shoul
be laundered using a preparatio
which sterilizes during the wash
"No hands" dressing technique
should be revived. In severa
hospitals these simple measure
have reduced the incidence o
postoperative wound infections
to their normal 2%.◀

Wisconsin M.J., 58:307-309,1959.

Levator Spasm Syndrome

WILLIAM T. SMITH, M.D., *Minneapolis, Minnesota*

Diagnosis depends upon finding of spastic tender muscle or muscles of the pelvic sling. Treatment consists of massage of involved muscles and surgical or medical control of any inflammatory processes present. Patients should take sitz baths, warm water enemas, and aspirin as an analgesic.

A fairly common ailment seen in general practice is painful spasm of the levator ani, coccygeus and the pyriformis muscles, either separately or as a group. Because of the peculiar complaints and lack of evident signs, the condition is often overlooked. Many of these patients have carried their complaints to gynecologists, urologists, orthopedists, and chiropractors without any organic difficulty being recognized. Some have been diagnosed and treated for prostatitis, pelvic inflammatory disease, sciatica, and slipped disc.

Most of these patients sit, resting the weight on one buttock or the other, and complain of accentuation of pain in the act of rising, or when they attempt to sit squarely on a chair. Affected muscles feel larger than normal. The uninvolved side feels flat and relaxed. In cases of true levator spasm, the coccyx is not painful on bi-digital examination. Most cases are unilateral. Examination may be done in the inverted or left Sims position, the gloved finger inserted the full length of the rectum, the flexor surface being just anterior to the coccyx and sacrum. Bi-digital examination of the coccyx may elicit tenderness. As the finger is moved laterally, anteriorly and medially, only part of the pyriformis can be felt while most of the coccygeus and the levators can be felt as they proceed to their insertion to the coccyx and sacrum. If this disease goes untreated for years, the affected muscle may shrink and have the feel of ligamentous or fascial bands. X-ray is of little or no value in the diagnosis.

The diagnosis of this syndrome rests upon the demonstration of a spastic tender muscle or muscles of the pelvic sling. Inflam-

matory disease of the anorectum and adjacent viscera should be sought, but in few instances can it be demonstrated.

Treatment consists of massage of the involved muscles and surgical or medical control of any inflammatory processes present. Massage is best done with the patient in the left Sims position. The index finger inserted its full length, the flexor surface toward the coccyx, gentle but firm pressure being made as the finger is drawn over the bellies of the spastic muscles in a postero-anterior stropping motion. Having the patient bear down may help to relax the tender muscle and the massage is better tolerated. Massage is continued on each side for 15 or 20 strokes (for five minutes). This is done daily for four or five days, then every other day until improvement is shown. After the first or second treatment the pa may be worse. After half a d en, most patients show good i provement. Massage is then co tinued at regular intervals un the pain has disappeared and further treatment is necessary

At home, the patient takes si baths, warm water enemas, a aspirin as an analgesic. Drugs reduce muscle spasm have be of no value. Voluntary contra tion and relaxation of the glute maximus and the pelvic slin muscles improves the tone an reduces spasm. This can be don many times daily without incon venience and seems to be parti cularly valuable in women wi loose, sagging pelvic muscle These patients must be warne to sit on a firm surface and allo the weight to rest upon the isch ial tuberosities and muscles the back of the thigh.◄

Minnesota Med., 52:1076-1079,1959.

neurysms of Abdominal orta with Fever

In reviewing 20,201 necropsies, 8 arteriosclerotic abdominal rtic aneurysms measuring ore than 2 cm. were found; condary bacterial infection was und in only 6 (3%). Four of ese 6 patients with infected eurysms were febrile, and in e aneurysms of 5, gram-positive cocci were demonstrated histologically. Rupture occurred in % (4 of 6 cases) of the infected arteriosclerotic aneurysms in nother series, compared to 18% the non-infected type.

The presence of bacterial infection should be suspected in atients with abdominal aneuysms and fever. Positive blood ultures would lend support to uch a suspicion. Leukocytosis nd anemia are common in paents with ruptured aneurysms, ut a significant fever is unommon. Once an arteriosclerotic aneurysm becomes infected, he incidence of rupture is high. rophylactic antibiotic therapy hould be considered whenever acteremia is likely to develop patients with aneurysms of rge vessels.

n Eyck, F. W., et al., *Proc. Staff Meet. Mayo Clin.*, 35:1-7,1960.

Critical Evaluation of Thromboangiitis Obliterans

Studies in 84 patients with arterial obstruction not only provided no clues whereby thromboangiitis obliterans could be distinguished clinically from atherosclerosis, but also did not permit the conclusion that Buerger's disease can be diagnosed by exclusion. The failure to recognize atherosclerosis or its sequelae clinically reflects the inadequacy of diagnostic technology rather than evidence that the disease is not present.

It is evident that the disease originally described by Buerger is indistinguishable from atherosclerosis, systemic embolization, or peripheral thrombosis singly or in combination. Adequate data were never presented to indicate that the patients Buerger and his contemporaries studied had a clinically, pathologically or etiologically distinct morbid process. Thromboangiitis obliterans cannot be considered an entity in either the clinical or pathologic sense, and it is recommended that the term be discarded.

Wessler, S., et al., *New England J. Med.*, 262:1149-1160,1960.

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Wessler, S., et al., *New England J. Med.*, 262:1149-1160,1960.

Spontaneous Expulsion of a Rectal Polyp

A girl of 18 was admitted because during a bowel movement she had felt something give and this was followed by bleeding for at least 30 minutes. Examination with the anoscope revealed that active bleeding had ceased and there was no gross evidence of pathology. Later, the patient's mother brought to the hospital a particle of tissue, 2 cm. in diameter, which had been passed by rectum before the bleeding began. The pathologist reported it as an adenomatous polyp. On the following day examination by proctoscope revealed an ulcer and blood clot 5 cm. above the anus, where the polyp had been attached. A barium enema examination revealed no evidence of other polyps, and no other pathology was found during the patient's hospital stay.

Vernon, S., *Am. J. Proctology*, 11:129-131, 1960.

Treatment of Amebiasis

Amebiasis is not a clinically important infection in this country despite the prevalence of intestinal infection with E. histolytica in certain areas. Surveys based on stool examinations of hospital patients and rural inhabitants in these areas have disclosed infection rates as high as 20%. Surveys in many other areas of the country have di closed infection rates of 1 to 4

The schedule of treatme should be determined by t clinical findings rath whether cysts or tropho found in the stool. It should recalled that the stage of the o ganism found frequently depen on whether the stool is natural liquid or soft or collected after purgative, and on the method laboratory examination. The p tential toxicity of the agents be used should be careful weighed against the degree disease or disability (if any) d to the infection.

For the asymptomatic carri and mild case the objective treatment should be the ultima elimination of the infection by schedule of simple and safe o therapy. Antibiotics and dru containing heavy metals are c traindicated because they p duce symptoms far more both some than does the mild ame infection. Diiodohydroxyquin well tolerated, provides cure at least 75% and is the least t ic of the agents available. T usual dose is 0.6 gm. three ti daily for three weeks. Stool e aminations may be reinstitu soon after completion of tre ment and repeated at interval three to six months. Very ra resort to another drug will necessary, in such a case car sone 0.25 gm. twice daily for

ays ma be prescribed. Further erapy must be determined olely on whether amebae can e found and not on speculation r on recurrence of symptoms. In ost cases a single course of eatment will eradicate the in-ection.

Emetine HCl is effective for rminating the distressing mptoms and signs of acute se-ere amebic dysentery. The rap-lity of effect is dramatic, even fter one or two injections. This rug is injected intramuscularly doses of 1 mg./kg. of body eight, but in doses not exceed-g 60 mg. per day and for not ore than 10 days at a time. Usu-lly, treatment of four to seven ays controls the symptoms. Tet-cycline 2.0 gm. daily is given multaneously in divided doses r a few days, then 1.0 gm. daily given to a total of 10 days of ntibiotic therapy. The tetracy-ine compounds hasten recovery nd healing of ulceration and in-ure cures in at least 90% of pa-ents.

The patient should be in bed nd watched for toxic manifes-tions. Although the amount of metine given is probably suffi-ent to destroy any amebae that ay have reached the liver, loroquine 0.5 gm. daily may e given for several weeks as a nclusion of the therapy.

st, H., *New England J. Med.*, 262:513-514, 1960.

Apathetic Hyperthyroidism

Hyperthyroidism can present in *formes frustes*, this being especially so in older patients. Typically women are affected; eye signs are slight or absent, and there is little enlargement of the thyroid gland. The patients look older than their years, have dry, wrinkled skin, and show few signs of disease in the circulatory system. Loss of weight is often greater than usual owing to long delay in recognition of the thyrotoxic state. Death occurs in stupor or coma without the frantic agitation of a thyrotoxic storm; operation of the thyroid gland is associated with a high mortality rate.

Most of the physiologic signs of thyrotoxicosis in dogs can be abolished by total sympathetic blockage, which brings back to normal the oxygen consumption, heart rate, and circulatory signs, suggesting that the response to hyperthyroidism may be mediated through the sympathico-adrenal hormones, augmented by thyroxine. In man, the urinary excretion of adrenalin is raised in hyperthyroidism, in parallel with the severity of the disease. A striking symptomatic and objective improvement in hyperthyroid patients given large doses of reserpine has been reported; some have been converted from a hyperkinetic to an apathetic state. The levels of p tein-bound iodine in the pla and of uptake of radio-iodine not change, though there some fall in the BMR.

Annotation, *Brit. M.J.*, 1:181-182,1960.

Diarrheal Disease

To get the cooperation of t patient, it may be wise to disc with him the following princip of treatment:

1. Concept of diarrhea as beneficial and protective me anism serving to clear the int tinal tract of irritants.

2. Early investigation of t cause.

3. Withholding of opiates b cause they interfere with int tinal clearance.

4. Withholding of antimicrobi agents until the cause is det mined.

5. Maintenance of optimum n trition, preferably by 3 regu meals and 3 in-between mea (all high in protein, rich in vit mins and minerals, low in re due, and high in calories), a omission of tobacco, chocola chewing gum, alcoholic bev ages, and soup.

5. Use of abdominal and per neal compresses to apply moi heat for relieving pain and pr moting healing.

6. Keeping a daily bowel ch for evaluation of condition bowel.

Fradkin, W. Z., *Am. J. Proctol.*, 11:40-44,19

e Heart and Heart Failure

Impairment of the pumping tion of the heart is basic in oc- rrence of congestive failure. mmonly failure difficulty with mping is chronic and the heart ls to meet only peak demands, hile in severe and chronic fail- e output may be low at all nes. In such situations as se- re anemia and thyrotoxicosis e demands may be sustained at high level, and, although the art may respond, inadequacy d failure occur. In some in- ances functional loss of a large ea of heart muscle as a result myocardial infarction inter- res with pumping; in others e overload is caused by ex- eme hypertension, and in oth- s a tight mitral stenosis may struct passage of blood.

Increase of extracellular fluid sults from faulty excretion ther than excessive ingestion. he kidneys fail to function roperly, and retention of salt nd water ensues. Once fluid has een retained, location in the ody is determined by hydrostat- factors. In some instances, ot clearly understood, collection ccurs mainly in serous cavities hile in others the lungs are se- ctively involved.

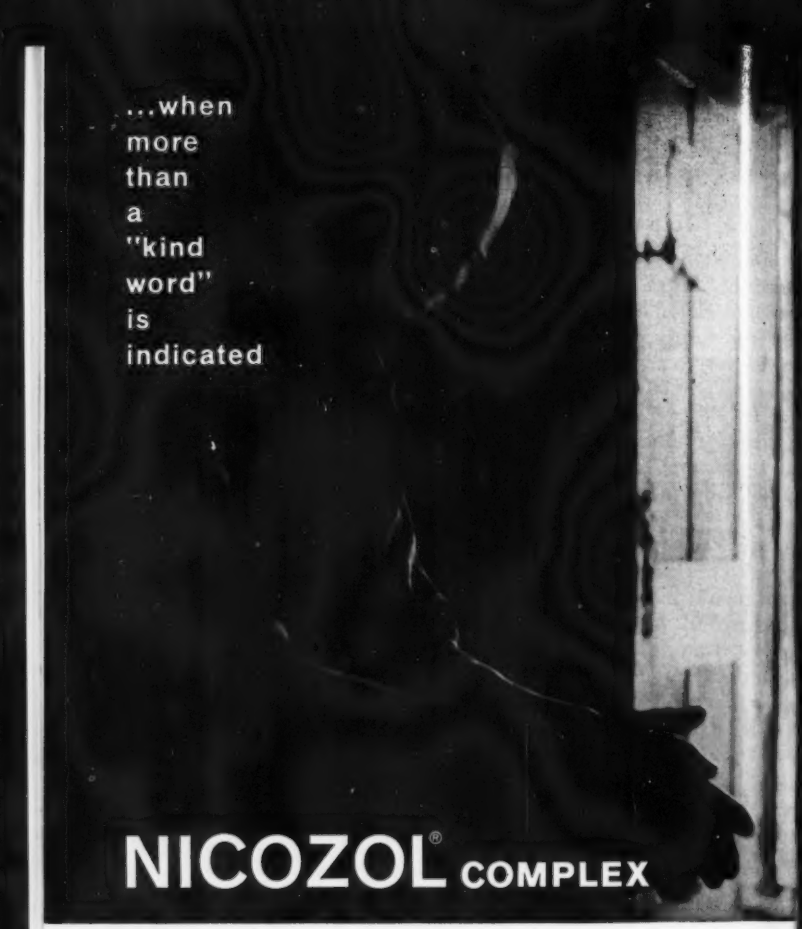
Usually a lesion that causes ilure principally affects one ide of the heart, more often the ft, and so heart pressure rises and extra fluid is placed in the lungs as under the skin. Dyspnea and other respiratory symptoms are common in patients whose disease affects the left ventricle. In aortic valve disease dramatic episodes of dyspnea alternate with periods which are almost symptom-free.

Low-sodium diets, diuretics, and other such means fail to attack the cause. With a few minor exceptions, curative therapy for a patient with a cardiovascular lesion is primarily surgical. Fortunately, the list of lesions that are operable or remediable is steadily growing. The physician, therefore, must be able to discriminate between operable and inoperable conditions. In many cases this is easy, others require specialized procedures.

Digitalis is the one drug effective in the chemical difficulties that cause heart muscle failure. Preparations differ only in absorption and speed of action. When used efficiently they improve the function of the ailing muscle.

To reduce the work load, anemia, chronic fever, and hyperthyroidism may have to be treated. Careful investigation of daily routine should be made, also of emotional conflicts, remaining aware of the dangers of overrestriction and unnecessary invalidism.

Warren, J. V., *Heart Bull.*, 9:1-2,1960.



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Vitamin B_{12}
Folic Acid
Panthenol
Choline Bitartrate
Inositol
l-Lysine Monohydrochloride
Vitamin E (a-Tocopherol Acetate)
Iron (as Ferric Pyrophosphate)
Trace Minerals as: Magnesium
Manganese 1 mg.; Zinc 1 mg.

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perior Mesenteric Artery ndrome: Diagnosis and eatment

The acute form, seen in 7 pa-ents, occurs after a period of mobilization caused by unre-ted disease or injury. Patients e nauseated, complain of ab-minal distress and distention, d vomit. The subacute or ronic form, seen in 11 patients, nds to occur in tall, slender, undernourished types. Plain entgenograms may show gase-s distention of the stomach and odenum but little or no gas yond the point of obstruction. his obstruction is seen as a ore or less straight-line shut-f of the duodenum along the teral border of the psoas shad-v on the right. Medical man-ement may be successful in the ute cases, nasogastric suction ing instituted and fluids given travenously to maintain water d electrolyte balance. For ronic cases, duodenojejunos-my is the best treatment, al-ough it is suggested that di-sion of the ligament of Treitz d freeing the distal portion of e duodenum may give relief of mptoms.

iser, G. C., et al., *Surg., Gynec. & Obst.*, 10:133-140,1960.

Frontal Skull Fractures

Indications for surgery in 10 patients included moderate or severe depression of the fracture, compounding of the fracture, excessive comminution of the fracture, and involvement of the paranasal sinuses in the fracture. Debridement of fragmented bone, shredded and potentially contaminated dura, and devitalized brain was carried out in each patient in order to prevent infection and other complications. Complete removal of the fractured frontal sinuses was done at the same time, with exenteration of all mucous membrane above the nasofrontal duct. Any extradural or subdural hematomas present were evacuated. Dural defects were closed either with pericranial or temporal fascia grafts or with polyethylene film. Nine of the 10 patients received tantalum cranioplasty, 5 at the time of primary debridement and 4 at a later date. No serious complications developed in any of the patients, and there has been no permanent change in personality, intellectual capacity, or memory.

Rader, J. P., *Texas J. Med.*, 56:102-107,1960.

Rapid Method of Finding Recurrent Laryngeal Nerves Safely During Thyroidectomy

A sound method must focus on a landmark that is always constant and itself easily found. The inferior horn of the thyroid cartilage fulfills these prerequisites. Using a collar incision the exposure should be started on the left side where the nerve has a simpler course than on the right. Drawing the left lobe medially and forward reveals and stretches a loose collection of areolar tissue lying between the carotid bundle and trachea. The tissue covers the recurrent laryngeal nerve. Next, find the landmark of the left inferior horn, which is masked by pharyngeal muscle.

To find the lower horn of thyroid cartilage, first find the cricoid cartilage in the operation wound. The right-handed will use the right index finger, which on the patient's left must point up the neck (the finger will point down the neck on the right side).

Beside, and touching, the cricoid, lay the right index lengthwise with its ulnar edge pressed against the vertebral column (covered by prevertebral muscle). The fingernail will then face laterally. Keep the finger pressing backwards with its ulnar edge; then rotate it clockwise very slightly till its pu begins to look forward. It me at once the firmness of the lo horn which the surgeon outli even better when the larynx gently pushed across the midl line towards his right index.

Muscle fibers overlie the ner only in the uppermost ⅓ to inch of the trunk. At the tip the horn, press the ball of a de tal burnisher directly backwar into the stretched areolar tissu Use the ball to open the tissu lengthwise for an inch. T nerve often appears at once it does not, move the ball that it will just touch the thi edge of the esophagus. Direct t ball backwards towards the ve tebral column. The convexity dorsum of the neck of the bu nisher then faces the nerve. R tate the burnisher and its cro and ball will then engage t nerve. Very gently draw the b nisher free from the opening the loose connective tissue.

The nerve, as a rule, is n trieved, in company with branch of the inferior thyr artery, and nerve and vessel c be coaxed apart by the less ball of the burnisher working one direction only, up the p tient's neck. No other tool cle the nerve so safely, and none less likely to wound the esoph gus.

Pisko-Dubienski, Z. A., *Irish J.M. Sc.*, 40-44,1960.

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Surgical Treatment of Cerebral Ischemia Caused by Extracranial Vascular Disease

In a study of 174 patients with cerebral ischemia, it was found that 42% had extracranial arterial occlusion. The internal carotid artery at the bifurcation of the common carotid was the most common site of obstruction, the left more often than the right. Severe occlusive disease may affect the carotid arteries, yet the intracranial vessels be near normal.

Symptoms after partial or complete occlusion of an internal carotid range from nil to massive and sudden (the classic "stroke"). Transient hemiparesis is common. As premonitory signs of hemiparesthesia, unilateral blindness, dizziness, or aphasis may be noted. Unilateral headache is fairly common. Fleeting neurologic symptoms from carotid disease are frequently passed off as being due to cerebral "vasospasm." Visual disturbances may occur when the head is turned. Head noises synchronous with heart beat have been reported, also homonymous hemianopsia. A partial or complete Horner's syndrome is fairly common, also diplopia and dysphagia. Dementia is common when both carotid arteries show occlusive disease.

Surgical treatment today is divided between endarterectomy and bypass graft. Six of 10 cases treated were in persons in the sixth decade, one was a boy of 15, all but one were males. The duration of symptoms was from 12 hours to one year. Endarterectomy was done in all cases with the exception of one (re pair of an arteriovenous fistula). General anesthesia was used for the most part and in 2 cases, in addition, hypothermia.

Five cases showed good result or complete recovery up to 5 years. One died of an unrelated cause after a year and autopsy showed a patent carotid bifurcation with smooth endothelium at the site of endarterectomy. Three patients were not improved, and 2 died. In these cases no back flow of blood was obtained after endarterectomy was done.

Taylor, F. H., et al., *North Carolina M* 21:173-179,1960.

Symptomless Abdominal Aneurysm

Discovery of a symptomless abdominal aneurysm in the course of a routine medical examination is becoming increasingly common. Before the introduction of methods of excision of the abdominal aorta for aneurysms and aortic replacement by arterial grafting, the doctor was justified in saying nothing to the patient and waiting perhaps

severe pain developed before considering surgical treatment, is often of doubtful value and formidable risk. The main problem was that of witholding formation from the patient and deciding what to say to the family.

Any aneurysm diagnosed by abdominal palpation is fairly large and may rupture at any moment. Results of treatment of ruptured abdominal aneurysms (whether intraperitoneal or extraperitoneal) at a large general hospital showed that 21 were excised, resulting in 15 deaths. One-third of those patients whose aneurysm ruptured had had prior symptoms.

Patients with a large abdominal aneurysm have lived normal and pain-free lives for many years. For the past 3 years a policy of surgical excision for asymptomless abdominal aneurysm has been followed. To date the number excised has been 20, with no operative or postoperative deaths. There is no reason to suppose that these good results cannot be maintained in the future. Although the patients operated upon have been selected to some degree, the operation has been refused only in the presence of some major and usually very obvious contraindication. Of the 20 patients operated upon, one developed claudication of his left calf 6 months after surgery with probable complete or partial blockage of the left limb of his aortic graft. His symptoms were so mild that re-exploration was not justified at the time but may be necessary in the future. The ideal age group for surgery is probably under 70 years, the oldest patient in this series being 75. Patients with a history of 2 or more coronary thromboses, or with angina or marked dyspnea on exertion, are not candidates for this operation. The patient must have evidence of adequate renal function.

Certain types are not mentally equipped to face the knowledge that they harbor what may be a serious and lethal condition which can only be corrected by a major operation. In such cases it would probably be best to postpone surgical advice, despite the risks of such postponement.

The abdominal aneurysm which can be detected clinically with reasonable certainty has probably reached a size which makes its removal advisable. The mistake most likely to be made is in diagnosing an abdominal aneurysm in a thin person when it does not exist, and missing quite a large one in an obese person. In either case, further investigation is required to provide the answer.

Key, J. A., *Canad. M.A.J.*, 82:924-925,1960.

Surgical Correction of Atrial Septum Defect in Patients Over 60

Congenital heart disease may be the cause of cardiac symptoms in elderly patients, defect of the atrial septum being the commonest congenital heart lesion allowing long-term survival. The lesion was present in all of 5 patients reported on in this study, all being aged 60 or older, and all underwent successful surgical correction of the intracardiac defect.

Symptoms were of recent origin but had progressed rapidly and were severe in most patients, evidence of failure of the right side of the heart being present in 4 of the 5. Another feature uncommon in younger patients was atrial fibrillation in 4 of these 5. All patients had increased pulmonary artery pressure, but only one had a hemodynamically significant right-to-left shunt.

Surgical correction in such cases is clearly indicated in the presence of significant symptoms and a large pulmonary blood flow. Both the atrial-well method and the open approach with extracorporeal circulation were employed successfully in these cases. All the patients survived operation and were symptomatically improved.

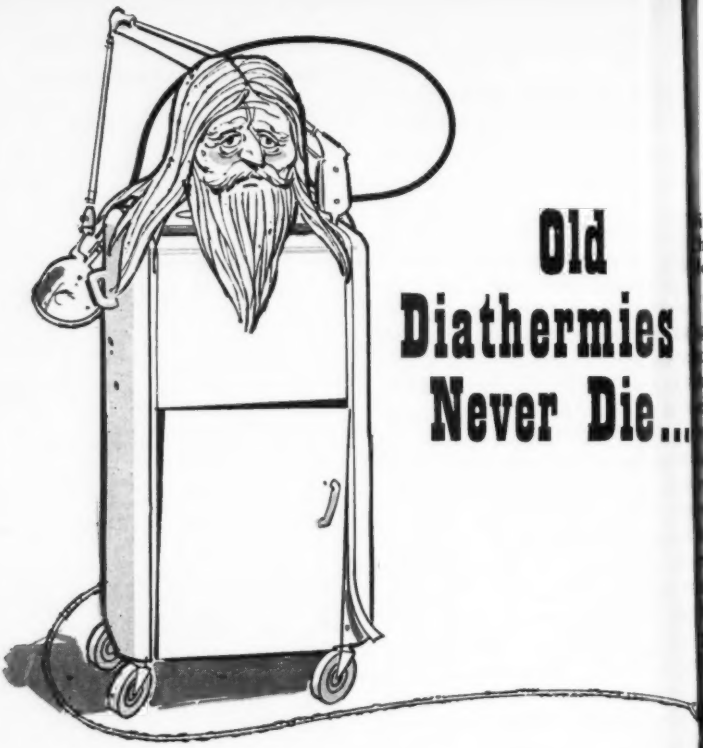
Ellis, F. H., Jr., et al., *New England J. Med.* 262:219-224,1960.

upture of Small Intestine y Nonpenetrating Injury

Closed injury of the small owel was found in 9 of 124 pa- ents with severe abdominal in- ury treated during the past 10 ears, an incidence of 7.2%. Ages anged from 18 to 64. The duo- enum was injured in 2, the roximal jejunum in 2, the mid- jejunum in 1, the terminal ileum n 3, and multiple sites of the eum in 1. All 9 were treated urgically and 3 died.

Rupture should be suspected n all abdominal injuries, espe- ially when caused by a steering olumn, a gear-shift lever, a lank of wood, a kick, or a shear- ng force across the abdomen. arly diagnosis being vital, these atients should be hospitalized r thorough examination. An ccurate history, particularly as o type and severity of injury, is mportant. Radiographic studies hould be made and may be elpful if repeated at intervals, ut a negative report cannot rule ut rupture of the small bowel. n increase in abdominal signs nd symptoms and a raised leu- ocyte count are suggestive of eritoneal soilage. Diagnostic aparotomy is wise whenever here is any doubt after a rea- onable period of observation. he bowel should be examined arefully and in sequence along s entire length.

horlakson, R. H., *Canad. M.A.J.*, 82:989-995, 1960.



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iuretic Efficacy: Assay of hlorothiazide and eralluride

The assay method used is designed to compare the 2 drugs, not for their "potency" but for their effectiveness in clearing edema, data being supplied by ed-patients in congestive heart ailure maintained under conventional conditions of diet, salt estriction, and digitalization. A iuretic agent is given daily or very other day, and patients re accurately weighed every 24 ours. The 2 diuretic drugs are iven in maximally effective oses in a sequence of patterns ABBA and BAAB) arranged to rovide paired responses free of ias, each response being the eight loss 24 hours after the ose. Since response time is the ame for all doses of both agents, he ratios obtained express the ifference in the time it would ake to clear the edema if either rug was used alone.

Assay in 22 patients showed hat, as compared to meralluride (Mercuhydrin) in 2-cc. intramuscular doses, chlorothiazide (Diuril) in 2-gm. oral doses is 40% as effective, taking 2½ imes as long to clear the edema. Whether slower or faster clearing is desirable remains a matter of clinical judgment.

Gold, H., et al., *J.A.M.A.*, 173:745-752,1960.

Painless Hypodermic Injections

There is an area in the upper arm which is least painful to subcutaneous injections. This was learned after giving many self-injections of pollen solution for hay fever. It is well known that those areas which seldom come in contact with other objects develop less nerve supply. Just as the palmar surface of the finger tip is much more sensitive to pain than the dorsal, there is a small area from one to two inches directly above the lateral epicondyle of the humerus that has less nerve supply and is less sensitive to pain.

Most subcutaneous injections are given in the middle, posterolateral surface of the upper arm. In this area, the nerve supply is abundant and injections are more painful. It is suggested that all subcutaneous injections, 2 cc. or less, be given in this area. Insert the sharp needle slowly (do not jab) and inject all medication slowly. Be gentle, do not rush, and do not appear hurried.

Fleming, T. S., *Missouri Med.*, 57:726,1960.

Iproniazid for the Treatment of Alcoholism

After a bout of heavy drinking there may follow a period of sadness, remorse, and guilt difficult for the patient to tolerate. Some patients become deeply morose, have severe anorexia and troubled sleep, and feel left out of life, unable to communicate with friends or members of their families. Sedatives do not always help, vitamins fail to stimulate appetite, and mood-elevating drugs of the ephedrine type only increase anxiety. If the medicaments prove fruitless after days and weeks of treatment, the patient frequently resumes drinking, or is referred to a psychiatric hospital.

A type of depression, seen after a minor drinking bout, occurs in persons with ordinarily acceptable behavior. This patient worries about his lack of control and will power, may doubt his sanity, and may entertain ideas of self-destruction. Most patients of this type usually recover as easily as do those of the first type. Ordinarily only the use of safe and standard medicaments, encouragement, and realistic optimism are required to help patients of these two groups.

A third type drinks as an escape from depression over family troubles, loss of job, and other problems. The drinking perio may be short. By the time th patient sees a physician, he close to the point of despair. If h refuses to become an in-patien and if there is not enough tim to obtain a legal commitment, h may be willing to try a few da of medical treatment. These a coholics should be seen daily t be given encouragement an consolation and to have dru therapy adjusted.

Administration of iproniaz (Marsilid) is beneficial in cas of alcoholism when history an physical examination show fre dom from past or present seriou liver involvement. The drug given with pyridoxine. Twent patients with severe depre sion, all alcoholics of long stan ing, were given iproniazid i varying dosages. Sixteen o tained fair to excellent result All those chosen for this trea ment were shown by history an gross physical examination to b free from liver disease. None d veloped liver disease, committe suicide, or had to be sent to hospital, although two patien quickly resumed drinking. Th risk of complications with th drug is much less than is that death or extensive hospitaliz tion due to continued drinkin High dosage increases the effe tiveness of iproniazid.

Travis, J. C., *J.A.M.A.*, 172:909-912,1960.

Use of Newer Uricosuric Agents

Indications for beginning therapy with a uricosuric drug include tophaceous deposits, gout with serum urate level consistently above 8 mg.%, and frequent attacks despite a maximally tolerated daily dose of colchicine. Sulfinpyrazone (Anturan) and zoxazolamine (Flexin) increase urate excretion, but like probenecid (Benemid) they are of no value in treating acute attacks of gouty arthritis. The greater potency of these agents carries a correspondingly greater danger of precipitating uric acid in the urinary tract. Such a possibility can be minimized by providing a high fluid intake, alkalinizing of the urine, and beginning therapy with low doses of these drugs. Sulfinpyrazone therapy is begun with 50 mg. twice daily, gradually increasing to 100 mg. 4 times daily. The smallest tablet of zoxazolamine available is 250 mg., far greater than is required for uricosuric action. Initial dosage should be ¼ tablet twice daily, gradually increasing to ½ tablet 4 times daily over a period of 2 weeks. The maintenance dose of uricosuric agents should be adjusted to meet individual needs and is governed by the reduction of serum urate level to normal. Maintenance colchicine is helpful in preventing acute attacks of gout that frequently accompany the institution of therapy with uricosuric agents.

Seegmiller, J. E., & Grayzel, A. I., *J.A.M.A.*, 173:1076-1080,1960.

Treatment of Obesity

Patients should be told by their physicians that obesity results from a disturbance of "life." Just as there are a few individuals who turn away from food (and acquire anorexia nervosa), there are millions who turn toward food. More obese patients would be helped with good instruction and encouragement than with simple dietotherapy. By no means all fat people should see psychiatrists, rather, the general practitioner should undertake this management and persevere in it in the full expectation of succeeding in the great majority of cases of patients who approach the problem honestly and cooperate faithfully.

The question remains as to whether the physician should prescribe anorexigenic drugs. If these are given, the statement should be made that "This drug is not the answer to your problem, but it does help some people for a few weeks or months." In most cases, the physician should ask his patients to help him in trying to get at the cause rather than at the symptoms.

Rynearson, E. H., *Minnesota Med.*, 43:348-349, 1960.

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rolithiasis in Childhood

Urinary calculi were observed 3 children, a boy of 2 admitted ith a history of fever for 4 days d several bouts of painless he- aturia, a girl of 3 with no sign xcept recurrent painless hema- ria, and a girl of 12 with sud- en onset of colicky abdominal ain. Intravenous pyelography onfirmed the diagnoses and all ecovered uneventfully after rgical removal of stones. Cal- ulous disease in infants and hildren occurs frequently nough to be included in the dif- erential diagnosis of many atyp- al childhood illnesses. Persist- nt pyuria, hematuria, and pain long the urinary tract are car- inal indications for complete rologic investigation.

eta, B. G., & McKendry, J. B. J., *Canad. M.A.J.*, 82:352-355,1960.

ignificance of Blood n the Urine

The commonest causes of ematuria between one and 5 ears are (in order of frequen- y) cystitis, pyelonephritis and lomerulonephritis. The com- monest malignant tumor of the idney in this age group, Wilm's umor, causes blood to appear in the urine (in one series in 18% of such patients). A mass palpable in the renal area is usually the first indication of the presence of this malignant growth, an unexplained fever possibly being the only symptom. Neoplasms of the bladder are unusual in children. In infant boys an ulceration of a stenosed urethral meatus is a frequent cause of bleeding.

In children aged 5 to 10, the causes in order of frequency are glomerulonephritis, cystitis and pyelonephritis. In both sexes inflammatory lesions with cystitis and pyelonephritis are the most frequent causative factors from ages 11 to 30. Occasionally, calculous disease or a papilloma of the bladder is the cause.

Inflammatory lesions continue to predominate between ages 31 and 40. In men of this age group, the second most frequent cause is papilloma of the bladder, the third, renal calculi. In women of this age group, inflammatory lesions of the urinary tract continue to be the principal etiologic factors, calculous disease being next and papilloma of the bladder last.

In men aged 41 to 50, bladder papilloma and carcinoma are the

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rincipal causes, followed by calculi and inflammatory lesions. These last retain the major role in this age group in women, calculous disease and neoplasms of bladder having minor roles. Neoplasms of kidneys or bladder, more frequent in patients past 40, may occur at any age.

In men age 51 to 60 the causes of bleeding in descending order of frequency are neoplasm of the bladder, hypertrophy of the prostate gland, carcinoma of the prostate gland, and cystitis. In women of this age group, the descending order of frequency is neoplasm of the bladder and cystitis.

In men aged 61 to 70, prostatism (benign or malignant) is the most frequent cause, then neoplasm of the bladder and inflammatory lesions. Neoplasm of the bladder and cystitis assume the major role in women of these ages.

Hematuria demands immediate investigation including cystoscopy. Cessation of the bleeding and lack of other symptoms do not minimize the gravity of the condition. The public must become cognizant of the serious aspects of hematuria and must be advised to seek immediate medical counsel when it is first observed.

Higgins, C. C., *West Virginia M.J.*, 56:94-96, 1960.

Intrascrotal Swellings: Differential Diagnosis

Begin by palpating the side of the swelling, remembering that the tunica vaginalis lies close to the testicle. Then, palpate the opposite side and compare the two. Next, palpate the epididymis — head, body, and tail—then the vas deferens both sides at the same time. A normal spermatic cord feels like a hard window cord, and one can feel several other thin cords and stringy fibers of the cremaster muscle.

The translucency test is made by making the intrascrotal swelling tense, grasping the neck between the thumb and two fingers while the other hand holds a flashlight to the distal side of the swelling. In uncomplicated hydrocele, transillumination will make the whole tumor glow with a pinkish light. The hand grasping the scrotal neck must keep fluid from collecting at the back or bottom of the sac by squeezing it up above the testicle. This test will fail if the scrotal walls are very thick or calcareous. If it is impossible to get above the swelling, the lesion is probably a hernia and not cancerous.

A vaginal hydrocele lies in front of and, to a variable degree, above the body of the testicle. Since a secondary hydrocele may be covering serious disease underneath, in case of doubt, aspirate the fluid and do a Papanicolaou test on it. The uncover testicle can now be palpat freely but always with great ca and gentleness. Malign growths seldom produce hydr cele, but no chances should taken of distributing cancer cel should any be present.

A secondary hydrocele almo always accompanies acute subacute orchiepididymitis a syphilis of the testicle, and abo one-third of the cases of testic lar tuberculosis. A cyst of t epididymis is a tense, translucen swelling which feels lobulated palpation.

A spermatocele is also transl cent, outlined as an epididym cyst, its fluid less clear. It usual ly lies above the testicle, an when it is pushed downwar and the fluid is aspirated, spe matozoa will usually be foun

In epididymo-orchitis the en tire gland is enlarged and tende and the vas thickened. A histor of an attack of mumps often ex plains this swelling.

Tuberculosis anywhere in th genitourinary tract is always sec ondary to primary lesions else where. A tuberculous epididy mis will show a craggy outlin when transillumined, with th vas greatly thickened, swelling not tender, but movement of tes ticle within the scrotum limited Syphilis of the testicle is hard painless, and freely movable.

Most dreaded of all scrot

...elling is is that caused by can-...r. The swelling is opaque. A ...lcified cyst, lipoma, or sebace-...s cyst will give a similar ap-...arance, even after the fluid has ...en aspirated and the interior ... the swelling exposed to full ...ght. An old clotted hematocele ...e to trauma, an atypical tuber-...lous lesion, or, rarely, a luetic ...umma may be deceptive. Diag-...osis of cancer of the testicle is ...eached largely by exclusion, but ...ntil it can be proved to be be-...gn, any scrotal swelling should ...e regarded as cancerous. When ...l the tests have been made and ...uspicion of cancer still remains, ...he last resort is biopsy.

...irwin, T. J., *New York J. Med.*, 59:879-880, 1959.

...eurogenic Bladder: ...haracteristics and Treatment

Varieties of this defect include:

1. The atonic bladder, which is without sensation, flaccid, very large, and loses urine by overflow. It results from interruption of the sacral spinal reflex arc or from spinal shock.

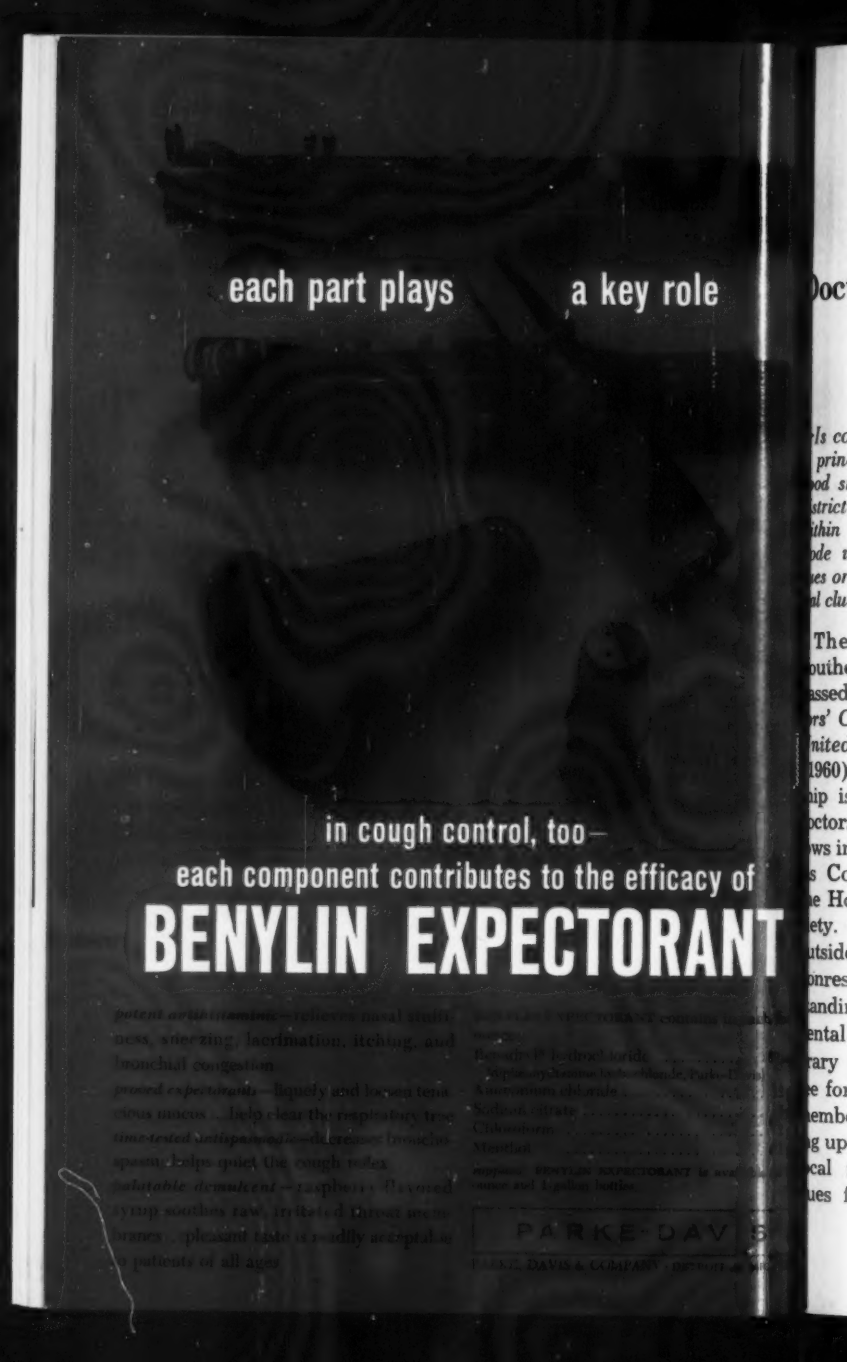
2. The autonomous, or nonreflex bladder, which is variable in capacity, with muscle contraction inefficient and uncoordinated, residual urine usually being present in large amounts. It results from interruption of the simple reflex arc with destruction of sensory and motor pathways.

3. The automatic, or reflex bladder, also without sensation but with good muscle tone, empties itself reasonably well. It is seen with complete interruption of cerebral control, the spinal reflex being intact. Frequent and urgent voiding, small capacity, little or no residual urine, enuresis and precipitate voiding are characteristic.

Management is directed toward providing the best possible emptying while preserving the integrity and function of the upper urinary tract. Atonic bladders and overflow incontinence require continuous drainage with an 18 F. latex Foley catheter. Intermittent distention and emptying of the bladder is required to maintain muscle tone, and prophylactic medication to prevent acute urinary infection is required.

Transurethral resection of the vesical neck to remove even the slightest degree of obstruction, or to weaken the bladder outlet, may allow a bladder to empty itself. Interruption of the nerve pathways may be of value, and sacral neurectomy or rhizotomy may relax spastic perineal musculature (allowing more satisfactory voiding). Pudendal neurectomy may be of value in upper motor neuron lesions, effecting relaxation of the vesicle neck.

Malashock, E. M., *Nebraska M.J.*, 45:59-61, 1960.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Doctors and the Law

CHARLES J. FRANKEL, M.D., L.L.B., *Editor*

Is corporation, whose membership principally confined to fellows in good standing of county medical or district dental society, a "social club" within section of Internal Revenue Code which imposes excise tax on fees or membership fees paid to "social club?"◀

The U.S. District Court, Southern District of Texas, passed on this question in *Doctors' Club of Houston, Texas* vs *United States,* 183 F. Supp. 152 (1960). Plaintiff club's membership is principally composed of doctors and dentists who are fellows in good standing of the Harris County Medical Society or the Houston District Dental Society. Qualified persons residing outside the county may become nonresident members if in good standing in their local medical or dental society. Club also has honorary members. The initiation fee for resident and nonresident members is $35 or $200, depending upon years of membership in local medical society. Monthly dues for resident members are $10; dues for nonresident members are $15 per year. Honorary members pay no initiation fee or dues. Section 4241(a) (1) of the Internal Revenue Code imposes an excise tax "equivalent to 20 percent of any amount paid as dues or membership fees to any social . . . club or organization, if the dues or fees of an active resident member are in excess of $10 per year." The law regards honorary members as life members and assesses the tax against the club. This suit was to recover tax collected from plaintiff on dues imputed to honorary members.

Club leases space on third floor of building in Texas Medical Center. Its facilities consist of a main dining room, lounge and bar, kitchen, and manager's office. On same floor of building are an auditorium seating 600 persons and two conference rooms of which it has the use. Club is open daily except Tuesday, and serves lunch and dinner during certain hours. Pur-

pose of club was to establish a convenient, centrally located meeting place where professional men could gather to exchange ideas and discuss and evaluate advances in medicine. Forty-six separate medical and dental organizations use the club quarters as a meeting place.

Club's social activities center around dining room, lounge and bar. Members can drink on premises only if they join locker pool which charges for each drink plus a service charge; club charges locker pool a monthly rental. Saturday night dances and New Year's Eve dances, sometimes in conjunction with food, are held at club. Any conflicting medical function has priority over Saturday dance. During football season, club organizes expeditions, including meal and bus service, to Rice Institute games. Club's dining facilities are used extensively by ladies but not always for social activities. Meetings of auxiliaries of various medical groups, nursing staffs, and female doctors, dentists and technicians are held on premises. Four style shows have been held but only in connection with luncheon meetings of auxiliaries for fund raising purposes.

Whether a club is to be classified as social or as business or professional depends on whether social features are organization main purpose or only incident thereto. Each case must b judged on its own facts. Th Court said there certainly wa sufficient evidence of a predomi nant scientific and professiona purpose to facilitate interchang of ideas through personal con tacts and group meetings. Th club has few of the usual trap pings of a social club; its dinin and lounge facilities are limite and it has no rooming or athlet facilities. Its membership re quirements are professional, no social. The fact that club serve food and drink does not make a social club. People eat whethe at work or at play and, thoug some consider drinking esse tially a social function, man consider liquor a natural con comitant of meals and desire while engaged in social or pro fessional activities. Substanti use of club facilities by ladies considered a mark of a soci club. However, it is difficult he to separate activities of auxili ries and other groups, engag in charitable or professional e deavors, from the ladies' pure social activities. The dances a football expeditions are adm tedly social activities but th constitute only 10-16% of clu activities on basis of number participants. The Court said was apparent that club's soc

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activities were merely incidental to its predominant professional purpose and that excise tax on honorary membership should, therefore, be refunded.

►*Is expert testimony as to possibility of causal relation between given injury and subsequent death sufficient to establish such relation?*◄

This question was before the Washington Supreme Court in *Bland* vs *King County*, 342 P. (2d) 599 (1959). Patient, while being moved from bed to wheel chair, was negligently allowed to fall to floor by defendant's employee. Patient suffered fractures; six days later he died. Plaintiff argued that the fractures caused shock which lowered patient's blood pressure to such an extent that fall was contributing cause of coronary infarct which resulted in his death. Expert witness for plaintiff testified that fractures can produce shock which could lower the person's blood pressure and that this drop in blood pressure could bring on heart attack, if person had weak heart, which would result in death.

Defendant contended that expert's testimony was not sufficient to establish causal relation between patient's fall and his death. The Court said that medical testimony as to possibility of causal relation between given injury and subsequent death is insufficient to establish such relation. By testimony as to possibility is meant testimony in which witness asserts that injury "could have" or "might have" caused the death, that is testimony which is confined to the possibility of the causal relation's existence, with no indication of its probability or likelihood. Verdicts cannot rest on speculation and conjecture. Expert's testimony here was nothing more than assumption pyramided upon assumption, amounting to nothing more than conjecture and speculation.

►*Is surgical nail a "device" within meaning of Federal Food and Drug Act which prohibits misbranding of devices? Was surgical nail used in operation on plaintiff's leg misbranded? If surgical nail was misbranded can plaintiff recover from its manufacturer for damages caused by misbranding?*◄

The U.S. Court of Appeals, Fourth Circuit, had these questions before it in *Orthopedic Equipment Company* vs *Eustler*, 276 F. (2d) 455 (1960). Plaintiff suffered leg fracture for which surgeons decided proper treatment was intramedullary nailing using a Kuntscher Cloverleaf Intramedullary Nail. After preparing medullary canal by use of 9 mm. reamer, doctors began to insert a Kuntscher Cloverleaf Intramedullary Nail man-

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factured by defendant. Nail had "OEC 9x40" imprinted on it signifying its dimensions. As nail was driven down canal of upper fragment of thigh bone, doctors at first met normal resistance. Although greater resistance was encountered when it penetrated further, doctors did not regard this as unusual since they knew they had used 9 mm. reamer and nail was marked to indicate 9 mm. They concluded it must have met some slight obstruction which would be passed or overcome without difficulty, and accordingly struck several slightly heavier blows. When nail still progressed no further, doctors decided to remove it. After efforts to remove nail failed, portion protruding below canal of upper thigh was cut off, the wound closed, and a cast applied in the hope that bone would atrophy sufficiently in a few weeks to loosen nail and permit its withdrawal. Attempt, a month later, to extract nail failed. Nail was finally removed month later. Measurements of cross-sections of the nail varied from 9.27 mm. to 10.12 mm. Because of nail's impaction, incurable osteomyelitis resulted. Plaintiff has permanently lost the use of his leg and its ultimate amputation is expected.

Complaint alleged that nail was misbranded in violation of Federal Food and Drug Act. D fendant contended that the A does not apply to surgical nai marketed for use only by skille surgeons. "Device" is defined Act as, "instruments, apparat and contrivances . . . intended to affect the structure of a function of the body of man . . . The Court said this definitio was clearly of sufficient breadt to include a surgical nail, whic frequently remains in patient body for many months and is d signed to and does affect bo the body's structure and fun tion.

Defendant further contende that evidence was insufficient raise jury question as to whet er nail was misbranded. The nails have imprinted on the two figures, e.g., 9x40, 10x42, b the imprint does not explain f ures' meaning. Parties agree that larger figure represen nail's length in centimeters. E pert witnesses for plaintiff tes fied that the prevailing interp tation of the profession of t cross-sectional dimension, i printed on the nail, was that could be inserted into a h made with a reamer bearing diameter measurement cor sponding to the number appe ing on the nail. Defend argued that measurement r lated to the reamer, which lea to various uncertainties: rea

s are not always used; if ream- is used it may have been ade by company other than aker of nail; reamer itself may e measured inexactly. The ourt said the evidence was suf- ient to raise a jury question as misbranding and jury was early warranted in finding nail as misbranded.

Although the Act does not ex- ressly provide a civil remedy r injured consumer, it imposes n absolute duty on manufac- rers not to misbrand their roducts. Question is whether iolation of this absolute duty negligence per se under Vir- inia law, the governing law of he case. Other state courts hich have passed on this ques- on in cases involving state laws esembling the Federal Food and rug Act have held violations to e negligence per se. Although he Virginia court has not passed n the question in relation to tate laws relating to misbrand- g, it has done so as to other tatutes and has held that viola- on of a statute is negligence er se. Therefore, it was proper r trial judge to charge that here was negligence per se and, nce jury found that violation as proximate cause of plain- ff's injury, he was entitled to ecover from the manufacturer.

◀*Instructions accompanying tetanus ntitoxin distributed by State Depart- ment of Public Health stated that, although there was considerable dif- ference of opinion as to which of three recognized methods of admin- istration was best, two were general- ly recognized as far superior. Can state be held liable for injuries re- sulting from injection given by one of "superior" methods?*◀

The New York Supreme Court, Appellate Division, passed on this question in *Gielskie* vs *State*, 200 N.Y.S. (2d) 691 (1960). Instructions accompanying tetanus antitoxin distributed by state said that there were three recognized methods of administration — intraspinously, intravenously, and intramuscularly — and that, although there was considerable difference of opinion as to which was more effective, the intraspinous and intravenous were generally recognized as far superior. Plaintiff, who had suffered compound comminuted fracture of finger while participating in horse pulling contest with which state had no connection, was given intraspinous injection of state-distributed antitoxin by his doctor. As result of injection, plaintiff is now permanently and totally paralyzed below tenth vertebra. It is undisputed that the introduction of any foreign substance into spinal canal would have caused the disastrous result.

Plaintiff contended state was

this hypertensive patient prefers Singoserp . . . and so does his physician

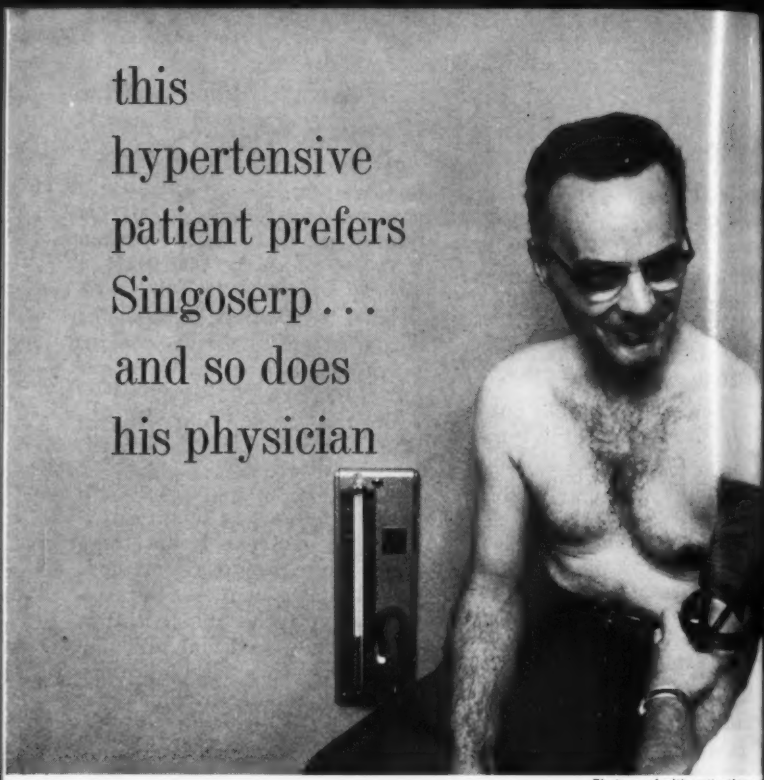

Photo used with patient's per

Patient's comment: "The other drug [whole root rauwolfia] made me feel lazy. I didn't feel in the mood to make my calls. My nose used to get stuffed up, too. This pill [Singoserp] doesn't give me any trouble at all."

Clinician's report: J. M., a salesman, had a 16-year history of hypertension. B pressure at first examination was 190/100 mm. Hg. Whole root rauwolfia lo pressure to 140/80 — but side effects were intolerable. Singoserp, 0.5 mg. daily, fa reduced pressure to 130/80 and eliminated all drug symptoms.

Many hypertensive patients and their physici prefer Singoserp® because it usually lowe blood pressure without rauwolfia side effects

SUPPLIED: Singoserp **Tablets,** 1 mg. (white, scored). Also available: Singoserp®-Esi **Tablets** #2 (white), each containing 1 mg. Singoserp and 25 mg. Esidrix; Singos Esidrix® **Tablets** #1 (white), each containing 0.5 mg. Singoserp and 25 mg. Esidrix.

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egligent in stating that intravenous and intraspinous methods of administering antitoxin were far superior. Plaintiff's experts agreed that, prior to 1954, intraspinous method was generally considered the most effective, but added that by 1954, the year plaintiff was injected, medical authority had changed because of greater risk of introducing foreign substance into spinal canal. The Court said the record showed that medical opinion and text books differ on the subject. Following one field of respectable medical opinion, though other, and perhaps more numerous medical opinions may differ, does not constitute negligence simply because result was disastrous in particular case. To hold state liable under circumstances presented here would mean either that state must render no public service at all or be an insurer against any bad results that might follow.

In criminal prosecution, is it proper to allow qualified clinical psychologist to testify, as expert, as to his opinion of defendant's sanity based on results of psychological tests? What standards must be met by clinical psychologist to qualify as expert witness? ◀

The Supreme Court of New Mexico passed on these questions in 1960 in *State* vs *Franco*, 347 P. (2d) 312. Defendant was charged with murder and kidnapping; the defense was insanity. Several psychiatrists, who had examined defendant, testified for the prosecution and for the defense on question of his sanity. Witness for the state, a clinical psychologist, was allowed to state his opinion that defendant was sane; his opinion was based on results of certain psychological tests made with respect to defendant.

Defendant contended that only physicians, surgeons and psychiatrists are competent to give an expert opinion as to sanity and that it was, therefore, error to permit the clinical psychologist to testify as an expert. The Court said there is no magic in particular titles or degrees and, in our age of intense scientific specialization, we might deny ourselves the best knowledge available by a rule that immutably fixes the educational qualifications to a particular degree. Although they have their limitations, psychological tests administered by a qualified and experienced psychologist make a valuable contribution to the total psychiatric examination of a criminal suspect. Therefore, a properly qualified psychologist may testify as an expert as to his opinion, based on results of tests made by him, as to criminal defendant's sanity.

Defendant further contended that psychologist who testified was not properly qualified. The Court said that determining the qualifications of an expert is a matter for trial judge's sound discretion. The witness stated his qualifications as to education and practical experience. However, there is nothing in the record indicating that trial judge had before him any standard by which to compare witness' qualifications with those of qualified psychologist. The Court said that, according to the authorities in the field, the minimum qualifications for a psychologist before being allowed to testify as an expert is that he has had at least five years of postgraduate training in clinical psychology, has a Ph.D. and has spent at least one year as a psychologi interne in a mental hospital ap proved by the American Psych logical Society. A psychologi who did not satisfy all these re quirements might, because of ex ceptionally broad training an experience, be qualified to tes fy as an expert, but he should b permitted to testify only after searching inquiry into his qua fications and the extent of h knowledge. The witness here ha no Ph.D. and lacked the re quired postgraduate trainin and the necessary experience i an approved mental institutio He should, therefore, not ha been permitted to testify as a expert.◀

Leukocyte Alkaline Phosphatase: Assay in Disorders other than Chronic Granulocytic Leukemia

Assays in more than 100 patients demonstrated that low leukocyte alkaline phosphatase activity may be found in a variety of hematologic and nonhematologic diseases and is not pathognomonic of chronic granulocytic leukemia. Although this enzymatic activity was found to be consistently very low only in paroxysmal nocturnal hemoglo binuria, low values were fou in some patients with other di eases such as idiopathic thro bocytopenic purpura, myelo metaplasia, infectious mononu leosis, pernicious anemia in re lapse, collagen disease, and re fractory or aplastic anemia.

Tanaka, K. R., et al., *New England J. M* 262:912-918,1960.

The Doctor Builds His Estate

Prepared monthly for the readers of Clinical Medicine by the Research Department of Bache & Co., 36 Wall Street, New York 5.

These monthly articles point out the method by which the physician may overcome the handicap imposed upon him by taxes on the bulk of his income at normal rates, as opposed to the capital gains tax open to many business men. One solution is systematic investment of current income in securities.◀

The question of value in the stock market is often an elusive concept to pin down. With the enchant for growth stocks in vogue for much of the last decade, there has been a tendency to bid up the shares of companies whose profits and dividends offer little attraction for the near term but whose stature within a particularly promising industry appeared to assure a profit spurt at some fairly distant date. Of course, when one deals with the long-term future, one must give weight to the uncertainties involved, and the higher the valuation given to the so-called "growth" stock, the stronger is the evidence that these uncertainties are not being taken into account.

During the 1950's, with an almost steadily expanding economy, these long range projections were frequently attained, and the advocates of high multiples for growth stocks were in the saddle. However, toward the close of the decade, and particularly in this first year of the 1960's, the U. S. economy has been slowing down. Thus, the outlook ahead does not seem as clear-cut as it did some years ago. Thus, there has begun a slow but perceptible reappraisal of the high valuation school and a tendency to seek the more stable companies who offer the sanctuary of established products, of consumer acceptance and of surer growth.

We have prepared a study of five companies in widely diverse fields whose products are well seasoned, whose earnings records have been comfortably upward and whose price at current levels

would appear to offer reasonable value.

Anheuser-Busch

The first company for examination is Anheuser-Busch, one of the oldest and largest breweries in the country. The company produces and distributes premium-priced Budweiser and Michelob draught beer on a national scale, and since 1955, its popularly priced Busch Bavarian has achieved excellent penetration in 15 southern and midwestern states. While beer sales constitute 85% of total volume, Anheuser maintains a fifth ranking industry position in the production of corn syrups and starches, and stands second in the manufacture of yeasts and malts. The company also controls the operations of the St. Louis Cardinals baseball club and owns Busch Stadium in St. Louis.

The company's excellent growth record since 1955 can be seen from the sharp increase in barrels of beer sold from 1955 to 1959 (5,616,793 to 8,064,756), from the spiral in dollar sales (1955: $201,718,743 to 1959: $295,992,022), and from the rise in per share earnings (1955: $1.67 to 1959: $2.69). We anticipate earnings of $3.15 to $3.25 for 1960.

Much of Anheuser's growth has come about as a direct result of its capital expenditure program. The new 500,000-barr Tampa plant came on strea in March of 1959, and w subsequently expanded to a 800,000-barrel capacity. Presen construction will increase th Los Angeles plant to a 1.5 millio barrel annual rate and brin total productive capacity t above the 10.5 million barr mark. Still not adequately equip ped to provide for anticipate future demand, a propose Houston brewery is now in th planning stage.

This dynamic expansion pr gram has done much to improv the company's earnings pictur First, increased capacity has e abled it to penetrate the nation market more effectively and di perse operations in order to cu large transportation costs. Ne it allowed the company to intr duce the highly successful Bus Bavarian beer, thus providi retail outlets with a line of pro ucts in every price range. The too, operating economies effect have improved profit margi thus offsetting constantly risi costs. The return on capital i vestment runs around 10% a is excellent, indeed.

Expansion has been and w continue to be financed witho common stock dilution. Depre ation allowances generate ve high cash earnings, and this y cash flow per share should

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ANHEUSER-BUSCH

Approximate Price 35	Capitalization (6/30/60)
Dividend $1.40	Long-Term Debt $24,788,000
Yield 4%	Common Stock .....4,876,791 shs.
Traded .....O.T.C.	

around $5.40. At 1959 year-end, current assets were 4.8 times current liabilities and cash alone was 1.6 times the current liabilities figure.

The company's history is impressive enough in itself, but when considering all the unfavorable factors affecting the brewing industry during the decade of the fifties, the record compiled is clearly excellent. Over the last 10 years, total consumption of beer remained virtually static, reflecting the actual decline in the greatest beer drinking segment of the population, namely, the 21 to 40 year age group. By 1970, however, the bumper crop of war babies will push the number of people in this group up about 12%, and the increase in total beer consumption is expected to rise more than proportionally. While we do not take these statistics to classify breweries as a real growth industry, we do feel that the future remains bright for selected companies within the group who have established a leading market position, maintained a consistently strong balance sheet, planned for adequate expansion of facilities and demonstrat substantial earning power. A heuser-Busch is such a compan

Wurlitzer

Our second company for p rusal is Wurlitzer Company, t country's largest and one of oldest music houses. The co pany is projecting 1961 earnin at $1.85-$2.00, up from the $1 reported for fiscal 1960, and t shares appear undervalued current levels. Six-month ear ings for fiscal 1961 were only 2 vs. 30¢, but the last half is tr ditionally the company's stron est.

Fifty per cent of the company operations comes from the ver stable sales of pianos and the fa growing sales of organs. Produ tion in these areas has bee stepped up in anticipation of sub stantially increased demand. A a side line to its musical instru ments division, the company ha introduced a new electronic de vice called "Side Man" whic adds authentic rhythm effects t any musical instrument playe This innovation has proved to b so popular that Wurlitzer c

IN ACNE smooth the skin— cheer the patient

se of pHisoHex for washing the skin augments any other therapy for acne—brings etter results. Now, pHisoAc Cream, a ew acne remedy for topical application, uppresses and masks lesions—dries, eels and degerms the skin. Together, HisoHex and pHisoAc provide **basic** omplementary topical therapy for acne.

HisoHex, antibacterial detergent with 3 er cent hexachlorophene, removes soil nd oil better than soap—provides ontinuous degerming action when used ften. pHisoHex is nonalkaline, nonirritatng and hypoallergenic.

hen pHisoAc Cream is used with HisoHex washings, it unplugs follicles, helps prevent development of comedones, pustules and scarring. New pHisoAc Cream is flesh-toned, not greasy. It contains colloidal sulfur 6 per cent, resorcinol 1.5 per cent, and hexachlorophene 0.3 per cent in a specially prepared base.

A new "self-help" booklet, **Teen-aged? Have acne? Feel lonely?**, gives important psychologic first aid for patients with acne and describes the proper use of pHisoHex and pHisoAc. Ask your Winthrop representative for copies.

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New York 18, N.Y.

barely meet the present demand, and while full development of the line will take some time, net operating profit has been satisfactory to date and long-term prospects in this area are excellent.

Wurlitzer also operates retail musical stores and manufactures coin-operated record players. While no accurate statistics are available, the company believes it makes and sells more juke boxes than any of its competitors. In this field, foreign operations have been very successful, and while competition abroad remains keen, business is very profitable and good overseas growth is expected as a result of expanded sales efforts. Another very profitable segment of the business is the recently-formed Wurlitzer Acceptance Corporation. In addition to bringing in additional revenues, this subsidiary has substantially reduced the amount of money needed to operate the parent company, which does a large percentage of its business on the installment basis.

Wurlitzer's decision three years ago to diversify into the field of missiles and electronic components resulted in an addition to gross revenues of approximately $3 million in fiscal 1960. This figure was up from the $800,000 added in the first year of operations, and results for the year ending March 31, 196 could see sales of this di vision double the 1960 leve The company has patents o several commercial items whic look promising and has recen ly developed a classified com ponent which is used in th manufacture of all missiles s that the product is not subje to the vagaries of Governme contract cancellations. This div sion has just signed a $1.7 mi lion contract and its backlog no stands at about $7 million. Th company, after suffering a se back in 1958, has forged ahea Sales in 1960 were 16% ahead o the previous year and earning saw almost a 31% boost fro 1959 to a level topping the 195 peak. Profit margins are up as result of a successful cost re duction program and can be ex pected to reach even higher lev els over the long term. A $2.5 plus per share earnings rate b fiscal 1962 is not an unreasonabl expectation. The company's fi nancial condition is strong an the balance sheet shows workin capital at about $25 per shar and a cash position of about $ per share.

Following the 1960 annua showing of the company's new product lines, the number of or ders placed was twice that of th previous record year, an indic tion of wide dealer acceptanc

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Milpath-400 – Yellow, scored tablets of 400 mg. Miltown (meprobamate) and 25 mg. tridihexethyl chloride. Bottle of 50.

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WALLACE LABORATORIES *Cranbury, N. J.*

WURLITZER

Approximate Price	15½	Capitalization (3/31/60)	
Dividend	80¢	Long-Term Debt	$5,267,000
Yield	5.2%	Common Stock	886,356 shs.
Traded	O.T.C.		

and a sign which augurs well for successful full-year results. While first-quarter earnings of 9¢ per share were down slightly from the 13¢ reported for the first quarter of fiscal 1960, the decrease is without meaning for the first quarter is an insignificant period in relation to full-year results. Continued growth is anticipated from both domestic and foreign operations.

At current price levels, the stock is much cheaper relative to earnings than other musical companies, and as earnings power increases we believe a revision of the price-earnings multiple will occur. Moreover, the dividend at an 80¢ annual rate (plus 3% stock in 1959) provides a reasonable yield. Purchases are recommended for investors seeking current income and future appreciation.

Wellington Management

Our third company is the Wellington Management Company, which acts as advisor to the Wellington Mutual Fund and the Wellington Equity Fund. Mutual funds have, of course, experienced phenomenal growth from 1941 to 1959. During the period, the assets of the mutual fund industry rose from less than $500 million to $15.8 billion as of December 31, 1959. During this 19-year period, investors purchased $13.4 billion mutual fund shares. During the same period, $4.8 billion of shares was redeemed, so that the net flow of capital into mutual funds from 1941 to 1959 was $8.6 billion.

Mutual funds are simply the vehicle through which the manager-sponsor offers its investment services (its product) to the public. A mutual fund usually has two contracts with the same or related organization: (1) an investment advisory and management contract, and (2) an underwriting or distributing contract. Both such contracts are provided for under the Investment Company Act of 1940, with certain safeguards to protect the shareholders of the fund. These two contracts are the most important assets of the management company. Conversely, these same contracts are the most important assets of the fund because they give the fund the services of an organization that

provides investment know-how, general administration, and a flow of new capital. Therefore, although the contracts have to be renewed annually, by the fund and/or its directors, this renewal is ordinarily a virtual certainty, assuming that the manager-sponsor has demonstrated its ability to provide sound management and distribution accomplishments, and has followed the strictest principles of integrity and trusteeship in the administration of the fund's affairs.

The company derives its revenues from two principal sources: (1) advisory fees received, and (2) sales concessions received from the funds sold. The company acts as advisor to Wellington Fund and (through its subsidiary, The Wellington Company Ltd.) as advisor to Wellington Equity Fund. The combined assets of the two funds were in excess of $1 billion when the stock was offered to the public in January, 1960. Wellington Company, Inc., a wholly-owned subsidiary, is the national distributor for both funds.

For its services as advisor, Wellington Management Co. received a quarterly fee which is equal to ⅛ of 1% on the first $70 million of assets administered and graduated downward to 1/16 of 1% on assets over $120 million. The advisor for the Equity Fund, which was initially offered in late 1958, receives a straight fee of ⅛ of 1% quarterly. Currently, the total assets of Wellington Fund are about $1,065,000,000 and Wellington Equity Fund about $45,000,000.

Wellington Management Company's second source of income is derived through the distributor company which conducts the sales promotion for both funds. Various types of sales services are offered to some 2,600 investment dealers throughout the country. For their sales efforts, the dealers receive 6% of the 8% base commission paid by the investor. The differential, or 2%, is used for wholesalers' commissions, advertising and literature of the two funds as well as other costs. Not only are the two funds sold through independent dealers all over the country, but Wellington Fund shares are also sold by First Investment Corp. of New York, under front-end contractual plans and single payment plans. The front-end contractual plan is set up for periodic payments over a 10-year period, with most of the sales charge being taken out of the earlier payments for the whole contract period. This deduction at the beginning of a plan tends to have investors keep up payments on their plan, and is not unlike in-

WELLINGTON MANAGEMENT COMPANY

Approximate Price	14
Dividend	60¢
Yield	4.3%
Traded	O.T.C.

Capitalization (6/30/60)	
Term Bank Loan	$300,000
Pfd. Stock, 5% Cum.	3,600 shs.
Class A (non-voting)	895,000 shs.
Class B (voting)	10,000 shs.

surance premiums where the cash-surrender value of a policy becomes more valuable as the years go on. Although the distributor does not get any of the sales fee on plans sold by First Investors Corp., the Management Company receives the management fee on the funds so generated. In addition, this type of plan has a stabilizing influence on earnings in that more than $300 million is scheduled to be paid into Wellington Fund over the next 10 years as the plans *already sold* are completed.

It would, at this time, be appropriate to examine the two funds in question. The Wellington Fund is a balanced fund with its portfolio divided between fixed income securities and equities. The ratio between the two types of investments varies with the economic conditions and the judgment of the management. The Fund's principal investment objectives are relative safety of principal, reasonable return on investment and profits without undue risk.

Wellington Equity Fund, initially offered in late 1958, has an investment objective of long-term capital growth and future income. This fund invests primarily in common stocks, emphasizing those with outstanding long-term appreciation prospects. The growth potential of this fund, we believe, is most promising.

The combined net assets of Wellington Fund and Wellington Equity Fund have grown from $106 million in 1949 to $1,060 million in 1959—or an annual compounded rate of growth equal to 26% per annum. Gross income since 1954 (derived principally from management fees and commissions) increased about 150% while expenses rose a little over 100%. As a result of the widening margin (expenses to gross income) in the same period, net income increased about 28%. Per share earnings have risen steadily from 24¢ in 1954 to 76¢ in 1959. Six month 1960 earnings are equal to 46¢ per share against 43¢ last year.

With mutual funds showing a consistent rate of growth, we be-

ding no **organic disease,** the doctor's gnosis was recurring states of anxiety. prescribes Meprospan-400, the only probamate in *sustained-release* form.

Patient takes one Meprospan-400 capsule at breakfast. Her tension is soon relieved, and she will not need another capsule till dinner.

lm and **relaxed,** the patient is no ger bothered by pressures of everyday , nor will she have autonomic disturbes, drowsiness or ataxia.

Alert and attentive, the patient participates in a P.T.A. meeting, following her evening capsule of Meprospan-400. Meprospan-400 does not interfere with her normal activities or mental efficiency.

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Usual dosage: One capsule at breakfast lasts all day, one capsule with evening meal lasts all night. **Supplied:** Meprospan-400, each blue-topped *sustained-release* capsule contains 400 mg. Miltown. **Also available:** Meprospan-200, each yellow-topped *sustained-release* capsule contains 200 mg. Miltown.

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WALLACE LABORATORIES / *Cranbury, N. J.*

lieve Wellington Management Company is behind the market (at current levels) and does not discount the indicated growth of the company. The stock appears to be an attractive purchase for those interested in long-term growth and reasonable price-earnings multiples and at an attractive dividend yield.

Laboratory for Electronics

Our fourth company is Laboratory for Electronics. This company, organized in 1946, derives approximately 80% of its revenues from its Doppler Navigation System which is used in the F-105 Interceptor. This navigation system represents an important advance and reflects not only the company's research prowess but also demonstrates outstanding capabilities in manufacturing. Over the last three years, this system has been the principal contributor towards increasing sales from about $7 million to $45 million. In the foreseeable future the demand for this navigation system for the F-105 should show further increases, although the bulk of the gain has already occurred.

In addition to the Doppler system, the company is on the verge of substantially increasing sales in electronic data processing equipment. To meet the need for instantaneous random access to very large masses of information, a system has been developed which can store tremendous quantities of data. This data can be obtained and displayed in the fraction of a second. In addition, LFE has developed a disc (the Bernoulli disc) for data storage. This disc is considerably less expensive than the more conventional memory drum.

With the data processing industry changing so rapidly, particularly in the laboratory, LFE is directing considerable efforts in the field of ferro-magnetic thin films, which are micro-miniature information storage devices of the future. Thus, LFE now is beginning to be an important source of storage equipment for data processing systems and, at the same time, is on the verge of gaining an even larger stake in the equipment of the future. As an independent company which does not produce the entire electronic data processing system, LFE will be in a position to deliver its components to the entire data-processing industry. In two to three years, these products could be a major profit source.

Another area, which is already providing sales, is in the general field of air traffic control. A ground control approach radar system is being delivered to the Air Force. Several foreign gov-

LABORATORY FOR ELECTRONICS

Approximate Price	42	(Capitalization (6/30/60)	
Dividend	None	Long-Term Debt	None
Yield	None	Common Stock	700,208 shs.
Traded	O.T.C.		

ernments have also expressed interest in this low-cost system with an order already received from Sweden. This equipment would appear to meet the needs of the smaller commercial airports.

LFE's strong footholds in its present product areas also provide the company with experience and know-how in related fields. For instance, microwave instruments, which currently contribute a relatively small percentage of sales, are an outgrowth of its other experiences.

In recent years, with the successes of the Doppler Navigation System, earnings and sales for LFE have shown substantial increases. Net income has increased from $51,000 in 1958 to $1,226,000 in 1960 and income for fiscal 1961 could approximate $1,750,000. 1961 per share earnings could approximate $2.50 compared to $2.07 in fiscal 1960.

With the great gains in sales and earnings, the financial condition has shown improvement. About five years ago there was serious question as to whether the company could survive. Now, the company has completely liquidated its bank indebtedness and is in an excellent position to finance internally the anticipated future growth. The present financial strength was caused principally by the improvement in earnings and partially by obtaining $2.1 million through the sale of stock in June of 1960.

The present facilities of the company are adequate for handling volume well in excess of present needs. More important, however, is that arrangements have been made to provide for future expansion when needed.

Now, with an important earnings and sales base from existing operations, Laboratory for Electronics, which had grown entirely from within, will be in a position to acquire other companies in related fields. Such a program would be of substantial benefit, and provides an important stimulus to future appreciation which is not reflected in the price of the shares.

Obear-Nester Glass

Our fifth and last company is Obear-Nester Glass Co., a growing producer of glass containers. The company is expected to rack

up peak sales and earnings in the current fiscal year ending June 30, 1961. Over the past decade sales have expanded three-fold and per share profits have climbed over 350%. Last year, on an 8% rise in sales to $20.1 million, net rose to a high of $2.34 per share from $2.18 in fiscal 1959.

Several factors enhance the outlook for an extension of the upswing in the current year. To begin with, the glass container industry as a whole continues to broaden its markets. In 1959, shipments amounted to 19.7 billion units, a 5% gain over 1959; this year, the total will top 23 billion. Moreover, Obear-Nester boasts an expanding stake in non-returnable glass containers, which are enjoying increasing popularity among beer and soft drink producers. Finally, the company plans to boost capacity by over 20%. In fiscal 1959, Obear-Nester's sales broke down as follows: beer bottles, 44.6%; liquor, 19%; soft drinks, 12.4%; household and industrial, 7.6%; wine, 5.9%; medicinal and health, 5.1%; food, 2.9%; toiletries and cosmetics, 2.4%; and the remainder, miscellaneous.

Headquartered in East St. Louis, Ill., the company serves over 500 customers, most of which are located within a 500-mile radius of the main plant. Seven concerns account for roughly 59% of Obear-Nester dollar volume; several of the accounts, however, are independent sales representatives who in turn, serve their own customers.

As indicated, non-returnable glass containers are of growing importance to Obear-Nester. This product line represents about 34% of fiscal 1959's production and the proportion is believed to have been larger last year. Rising demand for such containers from the beverage industries reflects growing acceptance by consumers attracted by the convenience of not having to return bottles. At the same time, brewers and others save the cost of picking up empty bottles.

"One-way" beer bottles have made stronger inroads into the market since the industry launched a massive promotional campaign last fall. Despite the late start, no-deposit beer bottle volume jumped 15.4% in 1959. In the first quarter this year, the gain amounted to nearly 28%. Today, such bottles command about 7% of the packaged beer market.

While sales of soft drink disposable containers also are rising, this market at present is of lesser importance to Obear-Nester. Nonetheless, in the last few years, use of non-returnable glass bottles among "soda pop" makers has grown from 16%

conomical aintenance therapy atopic dermatoses

ng-term use of topical steroids has l advantages in most eczematous eases; but this means daily applications many weeks and even months after ible signs of the disease have appeared.[1] The 0.25% hydrocortisone icals afford therapeutic effectiveness a fraction of the cost.[2]

Stoughton, R. B.: Report To The Council; oid Therapy In Skin Disorders, J.A.M.A. 1311-1315 (July 11) 1959. 2.) Goodman, Concentration of Topical Medications Dis- ed in Evaporating Vehicles with Particular erence to Hydrocortisone Alcohol, Clin. Med. 81-784 (May) 1959.

CORT-DOME®
(pH 4.6)
0.25% micronized hydrocortisone alcohol in the exclusive ACID MANTLE® vehicle.

NEO-CORT-DOME™
(pH 4.6)
0.25% micronized hydrocortisone alcohol plus 5.0 mg./Gm. of neomycin sulfate in the exclusive ACID MANTLE vehicle.

CARBO-CORT™
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0.25% micronized hydrocortisone alcohol plus 3.0% liquor carbonis detergens in the exclusive ACID MANTLE vehicle.

CORT-QUIN™
(pH 4.5)
0.25% micronized hydrocortisone alcohol plus 1.0% diiodohydroxyquinoline in the exclusive ACID MANTLE vehicle.

COR-TAR-QUIN™
(pH 5.0)
0.25% micronized hydrocortisone alcohol plus 1.0% diiodohydroxyquinoline and 2.0% liquor carbonis detergens in the exclusive ACID MANTLE vehicle.

DOME

The exclusive ACID MANTLE vehicle potentiates the ingredients in DOME preparations . . . restores and maintains the normal protective acidity of the skin...and facilitates healing.

Available as CREMES in 1 oz. tubes, 4 oz. and 1 lb. jars; and as LOTIONS in 4 fl. oz. bottles.

These preparations are also available with higher hydrocortisone concentrations

World Leader In Dermatologicals
DOME CHEMICALS INC.
New York / Los Angeles

OBEAR-NESTER GLASS

Approximate Price 24	Capitalization (6/30/60)
Dividend $1.20	Common Stock .....895,500 shs.
Yield 5%	
Traded .....O.T.C.	

000 gross to 1.5 million.

Obear-Nester's East St. Louis facility comprises 686,000 square feet. Its four furnaces command a daily capacity of about 480 tons of manufactured glass; in addition equipment includes 24 glass blowing machines and 24 annealing lehrs. A subsidiary, Lincoln Container Corp., operates a 114,-300 square foot plant in Lincoln, Ill., which is equipped with one furnace (115-ton daily capacity), five glass-blowing machines, and six annealing lehrs. In fiscal 1959, glass container production aggregated 2.7 million gross.

The company has been grow- ing at an annual rate of 12% Moreover, while retaining hig quality production standards an a competitive price schedule Obear-Nester enjoys pre-ta profit margins of about 22.5%.

Dividends currently are pai at a $1.20 per share annual rat

Finances are strong. Curren assets on June 30, 1960, totaled $10.5 million against current li abilities of $2.7 million. Cas items alone aggregated $7 mil lion, and the current ratio stood at 3.8 to 1.

Gastric Ulcer Developing After Esophagectomy for Carcinoma

In 2 patients gastric ulcer occurred 3 years after esophagogastrectomy and esophagectomy, with esophagogastric anastomoses, for carcinoma of the gastric cardia and the middle third of the esophagus, respectively. In the first case, the lesion appeared radiologically benign; in the second the lesion appeared malignant on x-ray. At surgical ex ploration both patients were found to have ulcerating metastatic lesions. Gastric ulcer may arise from surrounding, infiltrating metastatic lymph nodes or from ulcerating submucous or subserous lymphatic spread of the primary tumor.

Wildstein, G., & Baronofsky, I. D., *J. Mt. Sinai Hosp.*, 27:398-403,1960.

►Somacort *(Wallace)*

Anti-inflammatory, muscle relaxant/analgesic compound. Each tablet contains 350 mg. of carisoprodol and 2 mg. of prednisone. *Indications:* For acute and chronic arthritis. For chronic and acute musculoskeletal disorders characterized by inflammation, stiffness, pain, muscle spasm and limitation of motion as seen in rheumatic spondylitis, scleroderma, fibrositis, bursitis, tendinitis, and shoulder-arm syndrome. *Dosage:* One or two tablets four times daily. *Supplied:* In bottles containing 50 tablets.

►Purovax Vaccine *(Merck Sharp & Dohme)*

Poliomyelitis vaccine. Contains types 1, 2 and 3 poliomyelitis virus grown on monkey kidney and treated with formaldehyde. *Indications:* For active immunization against paralytic poliomyelitis. *Dosage:* Three injections of 0.5 cc. each, given with an interval of four to six weeks between first and second injection, third injection to be given seven months or more after second injection of initial series. *Supplied:* In 2 cc. (4 dose) vials.

►Carbocaine Hydrochloride *(Winthrop)*

Local anesthetic, available in two strengths: Multiple dose vials containing either 1% *or* 2% of mepivacaine hydrochloride. *Indications:* For infiltration, nerve block (major and minor surgery), therapeutic block, and for caudal and peridural anesthesia. *Dosage:* Depends on the surgical procedure, body area, individual response, and anesthetic technique. *Supplied:* Either strength, in multiple dose vials of 50 cc. Also available for caudal and peridural block, *Carbocaine* hydrochloride, 1%, in sterile, modified Ringer's solution, in single dose vials of 30 cc.

►Anameba Tablets *(Chicago)*

Oral amebicide. Each tablet contains 125 mg. of iodochlorhydroxyquin and bacitracin methylene disalicylate equivalent to 5000 U.S.P. units of bacitracin activity. *Indications:* Treatment of amebic dysentery carriers infected with intestinal *E. histolytica*. *Dosage:* One tablet three times daily after meals for eight days. *Supplied:* In packages of 24 tablets.

►Alba-Dome Creme and Lotion *(Dome)*

Dermatologic. Creme contains 20%, lotion contains either 5% or 10% monobenzone (monobenzyl ether of hydroquinone). *Indications:* Severe freckling, generalized lentigo, melasma of Addison's disease or pregnancy (chloasma), hyperpigmentation due to photosensitization or various inflammatory skin conditions. *Dosage:* Apply with cotton swab two or three times daily, using gentle rubbing action. Excessive depigmentation is reversible on discontinuance of treatment. *Supplied:* Creme, in 2 ounce jars. Lotion, either strength, in 2 ounce bottles.

►Medrol with Orthoxine Tablets *(Upjohn)*

Antiasthmatic. Each tablet contains 2 mg. of methylprednisolone and 75 mg. of methoxyphenamine. *Indications:* Moderately severe to severe bronchial asthma and allergic rhinitis. *Caution:* Use with caution in patients with diabetes mellitus, osteoporosis, chronic psychotic reaction, predisposition to thrombophlebitis, hypertension, congestive heart failure, and renal insufficiency. Do not use in patients with arrested tuberculosis, peptic ulcers, acute psychoses, Cushing's syndrome, herpes simplex keratitis, vaccinia, and varicella. *Dosage:* Usual adult dosage is one tablet three or four times daily. Total daily dose of methylprednisolone should not exceed 15 mg. *Supplied:* In bottles containing 30 or 100 tablets.

►Phazyme Tablets *(Reed & Carnrick)*

Each tablet contains 100 mg. of pepsin, 25 mg. of diastase, 60 mg. of activated dimethyl polysiloxane, and 240 mg. of pancreatin. *Indications:* For relief of flatulence. *Dosage:* One tablet with each meal and upon retiring, or as required. *Supplied:* In bottles containing 50 or 100 tablets.

►Lipalone Cream 0.25% *(Spirt*

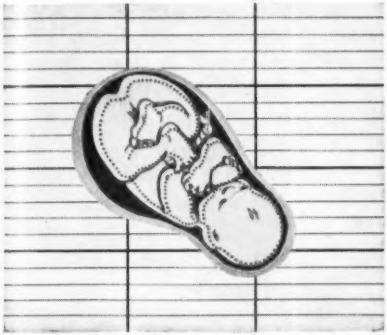
Contains 0.25% prednisolone and 0.5% hexachlorophene. *Indications:* Nonspecific anogenital pruritus, allergic dermatoses such as contact dermatitis and atopic eczema, neurodermatitis, pruritus with lichenification, asteatinic dermatitis, otitis externa (acute, subacute, and chronic), and dry, chafed, irritated skin. *Dosage:* Rub into the affected area two to four times daily. *Supplied:* In 5 gm., ½ ounce, and 1 ounce tubes, and 1 pound jar.

n w in threatened premature delivery

Dactil®-OB

Brand of piperidolate hydrochloride, hesperidin complex and vitamin C

prolongs gestation / increases fetal survival rate



no intolerance / no endocrine disturbance / reduces need for bed rest

In a study of 618 pregnancies over a period of 4 years, premature births were reduced from 13.1% of 168 patients without Dactil to 4.7% of 450 patients with Dactil.* In the treated patients birth weights were increased.

Dosage: 1 tablet q.i.d. from the beginning of pregnancy in any patient with a history of previous difficulty. For more information send for Dactil-OB brochure.

*Stephens, L. J.: The Prevention of Premature Delivery, presented at the Pacific Coast Fertility Society, Las Vegas, Nevada, November 15, 1959.

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Permitil Chronotabs *(White)*

Each tablet contains 1 mg. of fluphenazine dihydrochloride, derivative of phenothiazine, half of which is in the outer coating for immediate absorption. The other half is located in the barrier-protected inner core for sustained action. *Indications:* Behavioral disturbances characterized by anxiety, tension and instability; emotional stress accompanying organic disorders and complicating recovery from or acceptance of the underlying condition; chronic disorders in which anxiety and stress are contributing factors: Gastrointestinal dysfunction, neurodermatitis, asthma, premenstrual tension, arthritis, hypertension and tension headaches. *Dosage:* One tablet each morning. *Supplied:* In bottles containing 50 tablets.

►Domolene-HC Ointment *(Dome)*

Dermatologic. Contains 1% micronized hydrocortisone alcohol in a bland emollient base. *Indications:* To prevent drying of chronic eczematous dry skin during treatment. *Dosage:* Spread thin layer on affected area two or three times daily. *Supplied:* in ½ ounce, 1 ounce, or 2 ounce tubes.

►Lomotil Tablets *(Searle)*

Antiperistaltic. Each tablet contains 0.025 mg. of atropine sulfate and 2.5 mg. of diphenoxylate hydrochloride. *Indications:* For control of diarrhea associated with gastroenteritis, irritable bowel, functional hypermotility, regional enteritis, malabsorption syndrome, ulcerative colitis, food poisoning, and acute infections. *Dosage:* Adults, initially two tablets three or four times daily. Maintenance dose is individually determined. Children, according to age. *Supplied:* In bottles containing 100 tablets.

►Akalon "5" and "10" Capsules *(Strasenburgh)*

Anticholinergic. Each "5" capsule contains 5 mg. of methscopolamine and 20 mg. of methyl-tolyl-quinazolone. Each "10" capsule contains 10 mg. of methscopolamine and 40 mg. of methyl-tolyl-quinazolone (as cation exchange resin complexes of sulfonated polystyrene). *Indications:* Dyspepsia, peptic ulcer, hyperacidity, painful spasm, and gastroenteritis. *Contraindications:* Glaucoma, urinary bladder neck obstruction, and pyloric obstruction. *Dosage:* One capsule every 12 hours. *Supplied:* Either strength, in bottles containing 50 capsules.

book reviews

►Thoracic Surgery Before the 20th Century

by Lew A. Hochberg. First Edition. Vantage Press, N.U., 1960. $15.00

A complete review of chest surgery from its inception to modern times. The many illustrations are works of art. This volume is no mere dry recitation of the subject. It is full of amusing anecdotes which hold the reader's interest. This book will give the reader many hours of pleasure.

►Edema Mechanisms and Management

by J. H. Moyer and M. Fuchs. W. B. Saunders Company, Philadelphia. First Edition. 1960.

This large volume is perhaps the finest and most complete work on this very important subject. All phases of the many points involved are discussed fully by experts in their particular fields. Since inflammatory edema is observed in every infectious disorder, this reviewer is at a loss to understand just why at least one chapter on this extremely important subject was not included.

►Surgery in the Aged

edited by Frank Glenn, M.D.; Lewis Atterbury Stimson, Professor of Surgery; S. W. Moore, M.D., Professor of Clinical Surgery; and John M. Beal, M.D., Associate Professor of Clinical Surgery, Cornell University Medical College. The Blakiston Division, McGraw-Hill Book Company, Inc., New York. 1960. $17.50

With the increase in the number of the aged in our population, and the improvement in diagnosis and means of treatment of diseases of a surgical nature, more and more attention is being paid to surgical care of aged persons. In this monumental work, first fundamental concepts are laid down, then means of diagnosis and a technique of treatment of surgery of the various anatomical parts—all in a highly meritorious manner. The final chapter is devoted to trauma and reconstructive surgery, certainly a subject worthy of the most careful attention. It would be difficult to conceive of a subject before the profession in the United States more important than surgery of the aging, and equally difficult to conceive of a better manner of dealing with it.

►Synopsis of Pathology

by W. A. D. Anderson, M.A., M.D., F.A.C.P., Professor of Pathology, University of Miami School of Medicine, with 414 text illustrations and 4 color plates; Fifth Edition. The C. V. Mosby Company, St. Louis. 1960. $9.25

This 850-page synopsis carries all the material essential for keeping physicians and surgeons well posted on the knowledge of the pathology of today. Indeed, one might venture to say it would prove a satisfactory textbook for medical students.

►Communicable and Infectious Diseases: Diagnosis, Prevention and Treatment

by Franklin H. Top, M.D., M.P.H., F.A.C.P., Professor and Head, Department of Hygiene and Preventive Medicine, State University of Iowa, Iowa City, and 22 Collaborators, with 122 figures and 15 color plates; 4th Edition. The C. V. Mosby Company, St. Louis. 1960. $20.00

The declared purpose of this edition is to continue in pursuit of the objectives set forth in previous editions, with such modifications as have become necessary because of advances in knowledge in the intervals. In the field of viral diseases, particularly, important changes are necessary. Some communicable diseases occur more rarely and in milder form. The makers of this volume are 22 authoritative specialists. All chapters have been revised, some rewritten. New chapters have been added on: Acute Respiratory Infections, including Adenoviruses and the Common Cold, Enteroviruses: Coxsackie and ECHO Virus Infections, and Staphylococcal Infections. Chapters completely rewritten by new authors are those on Chemotherapeutic and Antibiotic Agents, Management of Communicable Diseases in the Hospital, and in the Home, The Bacterial Pneumonias, Influenza, Infantile Diarrhea due to Enteropathogenic Escherichia coli, Gonorrhea, the Leptospiroses and Rickettsial Diseases.

►Fundamentals of Clinical Hematology

by B. S. Leavell and O. A Thorup, Jr. First Edition. W. B Saunders Company, Philadelphia. 1960.

Well written and presented in every way, this volume is a masterpiece in its field. It should rapidly find excellent acceptance by the many workers and clinicians who are deeply interested in this basic study.

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upper
respiratory
infection

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Triacetyloleandomycin, equivalent to oleandomycin 125 mg. This is the URI antibiotic, clinically effective against certain antibiotic-resistant organisms.

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Triaminic®, 25 mg., three active components stop running noses. Relief starts in minutes, lasts for hours.

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Calurin®, calcium acetylsalicylate carbamide equivalent to aspirin 300 mg. This is the freely-soluble calcium aspirin that minimizes local irritation, chemical erosion, gastric damage. High, fast blood levels.

TAIN brings quick, symptomatic relief of the common cold (malaise, headache, muscular cramps, aches and pains) especially when susceptible organisms are likely to cause secondary infection. Usual adult dose is 2 Inlay-Tabs, q.i.d. In bottles of 50. ℞ only. Remember, to contain the bacteria-prone cold ...TAIN.

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►Lecture Notes on Ophthalmology

by P. D. Trevor-Roper. Charles C Thomas, Springfield. 1960. $3.50

It is a decided pleasure to review such a concise and beautifully presented work as is this small volume on diseases of the eye. Herein can be found all of the more important aspects which have to do with this subject. For those confreres who might appreciate an outstanding review on this phase of medical practice, here is a concise, handy volume which is beautifully written by an expert English colleague who is a master when it comes to teaching the profession in an interesting manner.

►Ciba Foundation Symposium on Cellular Aspects of Immunity

editors for the Ciba Foundation: G. E. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A. With 118 illustrations. Little, Brown and Company, Boston. $10.50

This is an exhaustive review dealing with certain aspects of a subject of the very first importance to mankind, and of the very first interest to all those having to do with the preservation of health—that of immunity. Those of you who are familiar with the publications of the Ciba Foundation will welcome eagerly this latest contribution. Those to whom the Cellular Aspects of Immunity will be the introductory volume may here be started on what will prove to be a gratifying serial study.

►Dr. Schweitzer of Lambarene

by Norman Cousins, with photographs by Clara Urquhart. Harper & Brothers, New York. 1960. $3.95

This book by the editor of the *Saturday Review*, is a personal appreciation of Dr. Albert Schweitzer, whom many consider as one of the world's greatest living personages. Cousins flew to Lambarene, in French Equatorial Africa, to observe the great medical missionary at work.

"The greatness of Schweitzer . . . is the man as symbol. It is not so much as what he has done for others, but what others have done because of him and the power of his example. The scholar, he once wrote, must not live for science alone, nor the businessman for his business, nor the artist for his art. If affirmation of life is genuine, it will 'demand from all that they sacrifice a portion of their own lives for others.' "

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Developed and perfected by Mead Johnson research, the new super-smooth coating of Natalins tablets makes them even easier to swallow, even more appealing to your OB patients. And there is no interference with disintegration time—so important for assured vitamin protection. Natalins tablets provide generous amounts of iron, calcium, vitamin C, plus eight other significant vitamins for the increased needs of multiparas.

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Robins

helps remove the cause of cough[1]

Glyceryl guaiacolate (Robitussin) exerts "the most intense and prolonged"[2] expectorant action "of practically all drugs presently used clinically as expectorants."[2]

It greatly increases the secretion of respiratory tract fluid,[2] which makes sputum less viscid and easier to raise,[2-4] makes tracheal and bronchial cilia more efficient,[3,5] and acts as a demulcent.[1-3,6]

Thus Robitussin increases the probability that a cough will achieve its natural purpose—i.e., to remove irritants such as exudates and mucus from the respiratory tract.[1,4,5]

references: 1. Blanchard, K., and Ford, R. A., J.-Lancet, 74:433, 1954. 2. Cass, L. J., and Frederik, W. S., Am. Pract. Dig. Treat., 2:844, 1951. 3. Hayes, E. W., and Jacobs, L. S., Dis. Chest, 30:441, 1956. 4. Blanchard, K., and Ford, R. A., Clin. Med., 3:961, 1956. 5. Blanchard, K., and Ford, R. A., Rocky Mt. M. J., 52:278, 1955. 6. Boyd, E. M., et al., Can. M. Assoc. J., 54:216, 1946.

Robitussin®

Glyceryl guaiacolate, 100 mg. in each 5 cc. teaspoonful

Robitussin® A-C

Glyceryl guaiacolate 100 mg., prophenpyridamine maleate 7.5 mg., and codeine phosphate 10 mg. in each 5 cc. tsp. Exempt narcotic.

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Clinical Medicine

DECEMBER 1960 *Vol. 7, Number 12*

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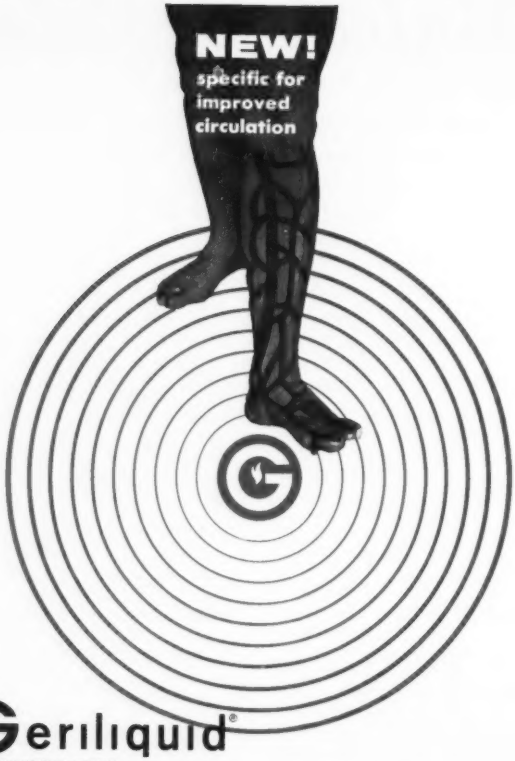
Clinical Medicine



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- **Increases ability to walk farther with less pain**
- **Relieves pain, dizziness and faintness**
- **Improves appetite and brightens the mood**

Composition: Each 5 ml. contains: Niacin 75 mg., Glycine 750 mg. in a sherry wine base. Contains Alcohol 5%.

Dosage: One or two teaspoons three times daily before meals.

Supplied: 8 oz. bottles.

GE-160

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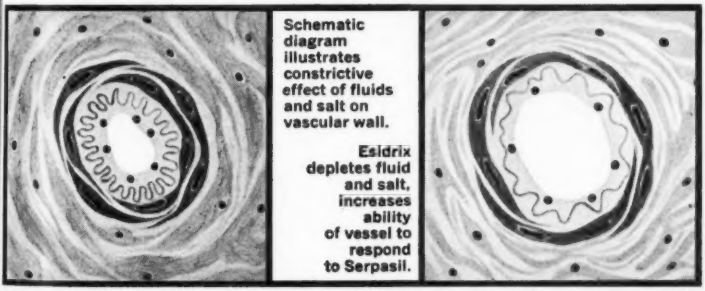
Why combining Esidrix® with Serpasil® improves control of high blood pressure

The presence of excess tissue fluids and salt can keep constricted blood vessels from dilating fully in response to antihypertensive drugs. ■ This may explain why the antihypertensive effect of Serpasil-Esidrix is better than average. By depleting fluid and electrolytes from surrounding tissue, Esidrix enables blood vessels to dilate to physiologic limits. Result: Peripheral resistance is reduced and blood pressure goes down — often to lower levels than can be achieved with single-drug therapy. Complete information sent on request.



Schematic diagram illustrates constrictive effect of fluids and salt on vascular wall.

Esidrix depletes fluid and salt, increases ability of vessel to respond to Serpasil.

SUPPLIED: **Tablets #2 (light orange), each containing 0.1 mg. Serpasil and 50 mg. Esidrix. Tablets #1 (light orange) each containing 0.1 mg. Serpasil and 25 mg. Esidrix.** 2/2838MB

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when your "otitis-prone" patient has a cold

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You may often see patients with a recurring pattern of ear infection following a cold. Before OTITIS sets in—or other complications, such as tonsillitis, pneumonitis, sinusitis, bronchitis, or adenitis—help forestall chronic bacterial involvement of the respiratory tract and relieve cold symptoms with ACHROCIDIN. □ **Each Coated Tablet contains:** ACHROMYCIN® Tetracycline HCl, 125 mg.; phenacetin, 120 mg.; caffeine, 30 mg.; salicylamide, 150 mg.; chlorothen citrate, 25 mg. □ **Usual adult dosage:** 2 tablets q.i.d. □ **Also available:** Syrup, caffeine-free (lemon-lime flavored)

Precautions: The use of antibiotics occasionally may result in overgrowth of nonsusceptible organisms. The antihistamine component may cause drowsiness.

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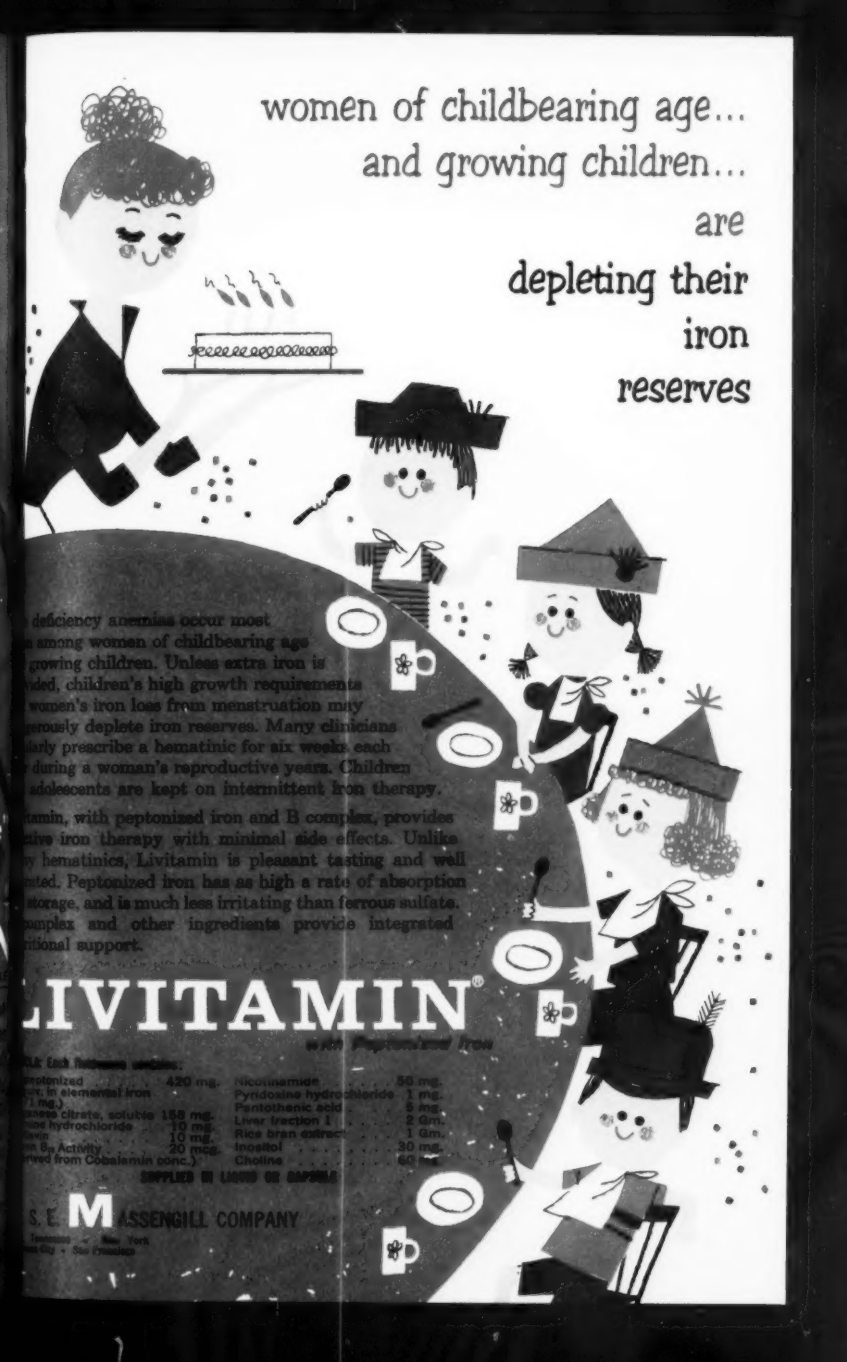
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and growing children...
are
depleting their
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reserves
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among women of childbearing age
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amin, with peptonized iron and B complex, provides
ive iron therapy with minimal side effects. Unlike
y hematinics, Livitamin is pleasant tasting and well
ated. Peptonized iron has as high a rate of absorption
storage, and is much less irritating than ferrous sulfate.
mplex and other ingredients provide integrated
itional support.
IVITAMIN®
Each
ptonized 420 mg.
n elemental iron
1 mg.)
anese citrate, soluble 158 mg.
ine hydrochloride 10 mg.
10 mg.
Activity 20 mcg.
ved from Cobalamin conc.)
Nicotinamide 50 mg.
Pyridoxine hydrochloride 1 mg.
Pantothenic acid 5 mg.
Liver fraction 1 2 Gm.
Rice bran extract 1 Gm.
Inositol 30 mg.
Choline 60 mg.
SUPPLIED IN LIQUID OR CAPSULE
S. E. MASSENGILL COMPANY

LIVITAMIN® *with Peptonized Iron*

. . . the preferred hematinic

*Keith, J.H.: Utilization and Toxicity of Peptonized Iron and Ferrous Sulfate, Am. J. Clin. Nutrition 1:35 (Jan.-Feb., 1957).

THE S. E. MASSENGILL COMPANY Bristol, Tennessee • New York • Kansas City • San Fra

Fuchs, M. and Moyer, J.:
Diseases of the Chest 35:314, (March) 1959.

"Premenstrual edema is present in 40% of women and...consists of weight gain, subcutaneous edema, emotional lability, breast turgidity, anxiety and tension." In addition to controlling the objective symptoms of premenstrual tension, HYDRODIURIL may afford relief of subjective complaints including tension, nervousness and headache.

DOSAGE: 25 to 50 mg. of HYDRODIURIL once or twice a day, beginning the first morning of symptoms and continuing until the onset of the menses.

SUPPLIED: 25 and 50 mg. scored tablets HYDRODIURIL (hydrochlorothiazide) in bottles of 100 and 1,000.

HYDRODIURIL is a trademark of Merck & Co., INC.

Additional information on HYDRODIURIL is available to the physician on request.

MSD MERCK SHARP & DOHME
Division of Merck & Co., INC. West Point, Pa.

The principle that makes

produces soft, normal stools in functional constipation

SURFAK®

Water doesn't roll off this duck's back . . . because the water is Surfak-treated. Surfak decreases interfacial tension between water and oil . . . penetrates the natural oils in the feathers, permits water absorption, adding weight so that the duck sinks.

Similarly, in functional constipation, Surfak quickly permeates the heterogeneous fecal mass. The superior surfactant action of calcium bis-(dioctyl sulfosuccinate) reduces the interfacial tension between the aqueous and lipoid phases of the intestinal content to minimal values. The result is soft homogeneous feces which are easily moved to evacuation, naturally.

DOSAGE:

Adults: **One 240 mg. Surfak capsule daily. *Children* (and adults with minimal needs): One to three 50 mg. Surfak capsules daily.**

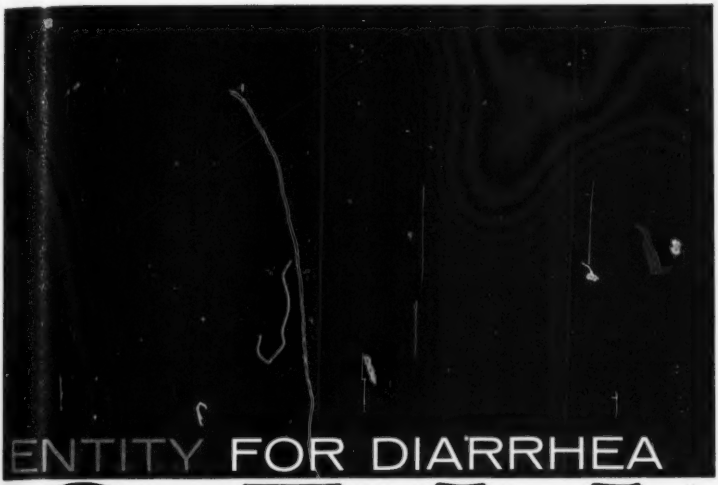
SUPPLIED:

240 mg. Surfak capsules in bottles of 15 and 100.

50 mg. Surfak capsules in bottles of 30 and 100.

LLOYD BROTHERS, INC.

CINCINNATI 3, OHIO



ENTITY FOR DIARRHEA

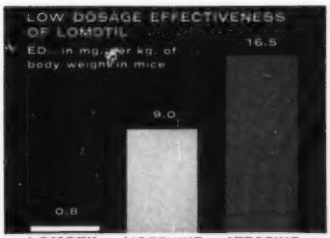
OTIL®

PROPULSIVE MOTILITY

without showing withdrawal symptoms, even when challenged with nalorphine.

Recommended dosages should not be exceeded.

DOSAGE: The recommended initial dosage for adults is two tablets (5 mg.) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. (1/2400 gr.) of atropine sulfate to discourage deliberate overdosage.



EFFICACY AND SAFETY of Lomotil are indicated by its low median effective dose. As measured by inhibition of charcoal propulsion in mice, Lomotil was effective in about 1/11 the dosage of morphine hydrochloride and in about 1/20 the dosage of atropine sulfate.

Subject to Federal Narcotic Law.

Descriptive literature and directions for use available in Physicians' New Product Brochure No. 81 from

G. D. SEARLE & CO.
P.O. Box 5110, Chicago 80, Illinois

Research in the Service of Medicine

In rheumatic disorders

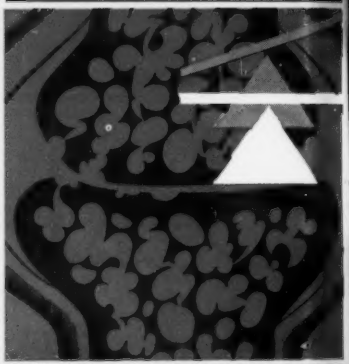
whenever aspirin proves inadequate

Sterazolidin

brand of prednisone-phenylbutazone

Even in the more transient rheumatic disorders an anti-inflammatory effect more potent than that provided by aspirin is often desirable to hasten recovery and get the patient back to work.

By combining the anti-inflammatory action of prednisone and phenylbutazone, Sterazolidin brings about exceptionally rapid resolution of inflammation with relief of symptoms and restoration of function.



Since Sterazolidin is effective in low dosage the possibility of significant hypercortisonism, even in long-term therapy, is substantially reduced.

Availability: Each Sterazolidin® capsule contains prednisone 1.25 mg.; Butazolidin® brand of phenylbutazone 50 mg.; dried aluminum hydroxide gel 100 mg.; magnesium trisilicate 50 mg., and homatropine methylbromide 1.25 mg. Bottles of 100 capsules.

Geigy, Ardsley, New York

Geigy

165-60


Bowling his best
in spite of
LOW BACK PAIN
Trancopal
Brand of chlormezanone
relaxes skeletal muscle spasm

Trancopal®

relieves spasm of skeletal muscle– quiets restlessness and irritability

The "tranquilaxant," Trancopal, quickly relieves skeletal muscle spasm and associated pain and reduces restlessness and irritability, allowing an early return to normal activity. In a series recently reported by Cohen: "Practically all the patients continued to work or carry out their usual responsibilities during the period of treatment."[1] Among his 1041 patients with low back pain, muscle spasm, or muscle cramps, Trancopal brought relief of symptoms to 1035 ("complete" relief in 692 and "marked but incomplete" relief in 343).[1]

Indications

Musculoskeletal disorders	Disorders with psychogenic components
Low back pain (lumbago)	Dysmenorrhea
Neck pain (torticollis)	Premenstrual tension
Bursitis	Anxiety and tension states
Fibrositis	Asthma
Myositis	Angina pectoris
Ankle sprain, tennis elbow	Alcoholism
Osteoarthritis	
Rheumatoid arthritis	
Disc syndrome	
Postoperative muscle spasm	

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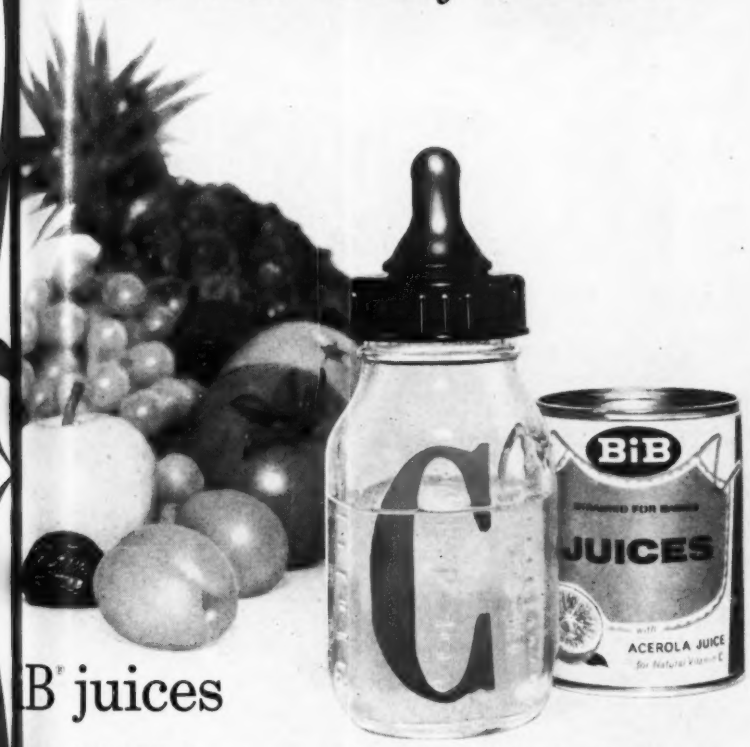
NOW...high natural vitamin C in a wide variety of flavors



B juices

a-Exclusive BiB Feature:

juices—Orange, Apple, White Grape, le, Prune-Orange, Orange-Apricot, and are standardized to protective vitamin with Acerola, the richest known *natural* f vitamin C.[1,2] Each ounce of *all* BiB citrus or non-citrus—provides more than imum daily requirement of vitamin C for

range Juice—Hypoallergenic

ergenicity and improved tolerance are through special processing which re- ed protein and peel oil impurities to neg- uantities. In a clinical study with Acerola,

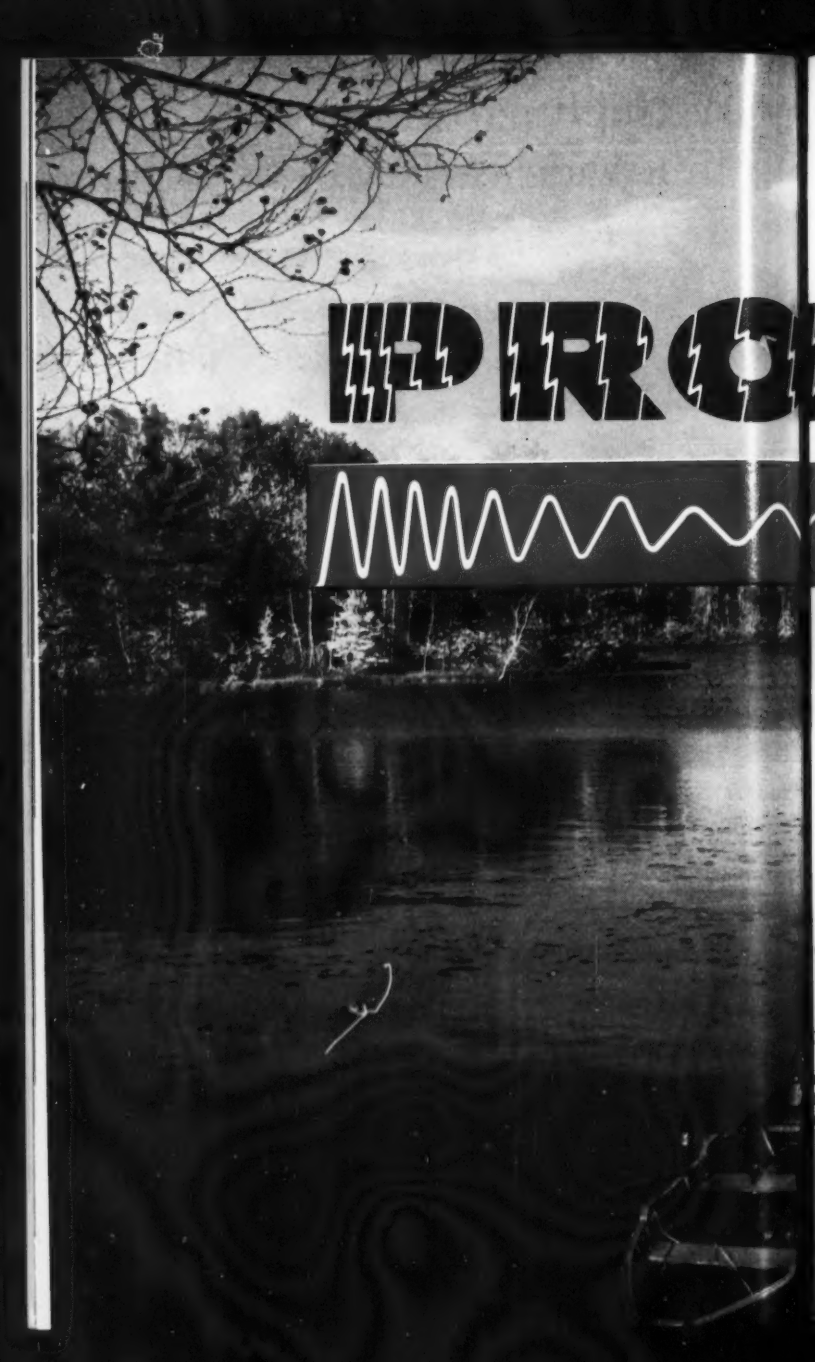
"No reactions occurred from ingestion or from skin and intradermal tests with Acerola juice."[2]

A Wide Variety at an Early Age

BiB juices permit early introduction of a wide variety of flavors—valuable in taste-training the infant. Special process assures free flow through bottle nipple; ideal for spoon or cup feeding, too. BiB juices require no reconstitution, no heating, no defrosting. All mother does is open the can of BiB juice and it's ready for feeding.

References: (1) Asenjo, C. F., and Freire de Guzman, A. R.: Science *103*:219 (Feb. 22) 1946. (2) Clein, W. H.: J. Pediat. *48*:140-145 (Feb.) 1956.

Mead Johnson
Symbol of service in medicine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GOTISTOP ANTS VERTIVERT

ANTIGO VERTS STOPIANT

ANTISTOP VERTS GOTIVERT

ANTIVERT STOPS VERTIGO

(virtually 9 times out of 10)

Remission in 82%; relief in 92%. So reports an investigator who recently studied ANTIVERT in dizziness.[1] After studying 50 patients, Scal concluded that "Those with Meniere's syndrome who were given the preparation [ANTIVERT] in the early stages of this condition, reported prompt improvement in the relief of dizziness, headaches and tinnitus."[1]

ANTIVERT combines meclizine (12.5 mg.) with nicotinic acid (50 mg.). Prescribe one ANTIVERT tablet before each meal for relief of Meniere's syndrome, arteriosclerotic vertigo, labyrinthitis, and vertigo of nonspecific origin.

Supplied: In bottles of 100 blue-and-white scored tablets. Prescription only.

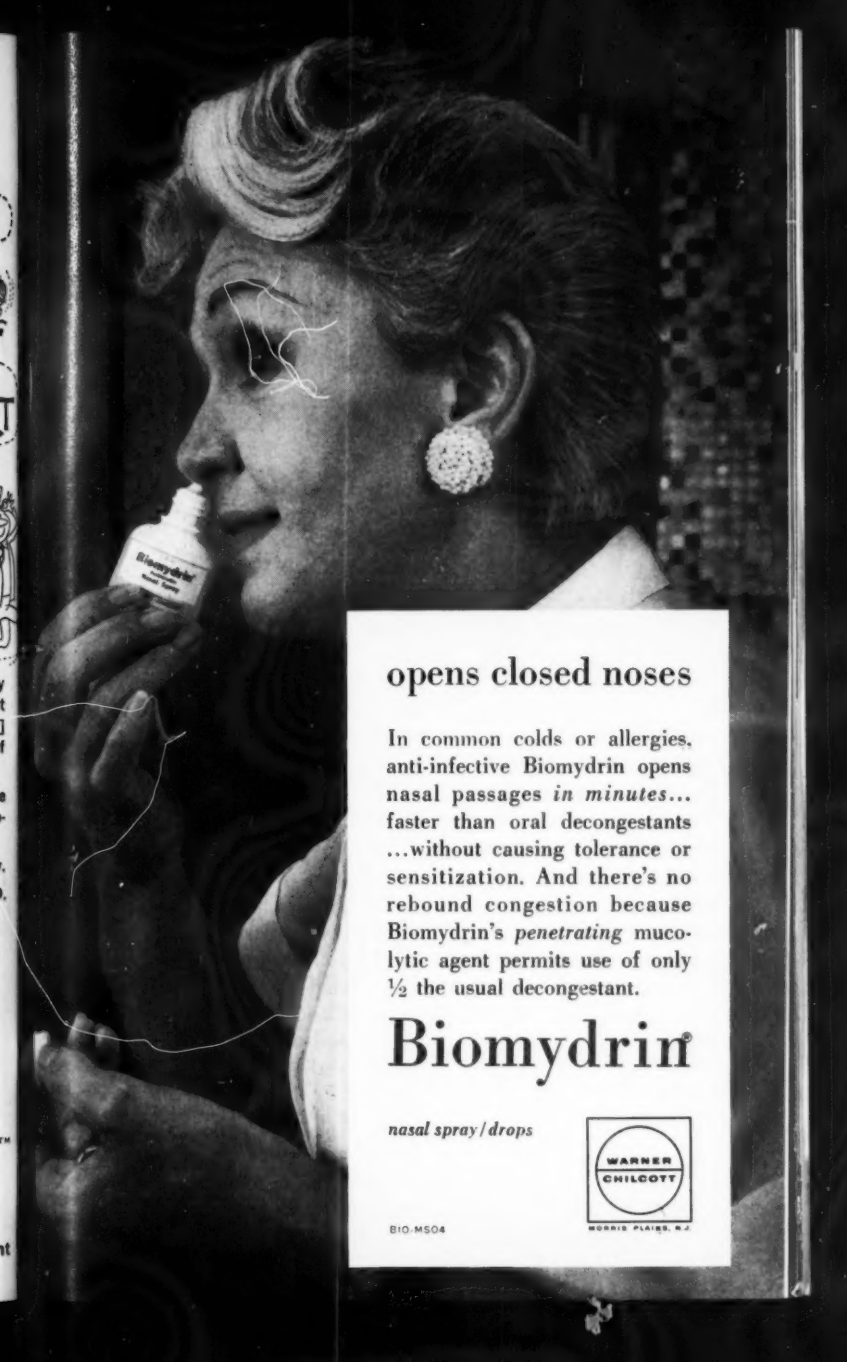
Reference: 1. Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

Antivert®

ROERIG Rx

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being™

and to help combat the nutritional problems of aging... NEOBON® capsules five-factor geriatric supplement



opens closed noses

In common colds or allergies, anti-infective Biomydrin opens nasal passages *in minutes*... faster than oral decongestants ...without causing tolerance or sensitization. And there's no rebound congestion because Biomydrin's *penetrating* mucolytic agent permits use of only ½ the usual decongestant.

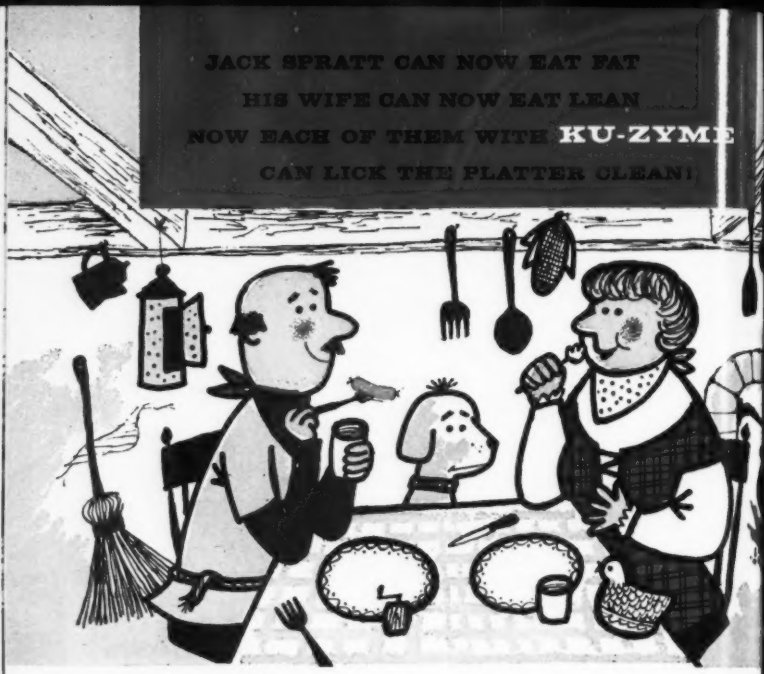
Biomydrin®

nasal spray / drops

WARNER CHILCOTT

MORRIS PLAINS, N.J.

BIO-MS04



NEW IMPROVED

KU-ZYME

FOR THE FIRST TIME . . . ALL 4 DIGESTIVE ENZYM

THERAPEUTIC USE—to digest fat, carbohydrate, protein and cellulose. Effect consistent lytic activity assured because ALL FOUR enzymes are K-U standard remain stable and are present in balanced proportions.

DIAGNOSTIC USE—When due to enzyme deficiency, non-specific "indiges (gas, distention, heartburn, etc.) is relieved by KU-ZYME within 48 h Many patients over 40 suffer from reduction of natural digestive juices.

DOSAGE: one capsule t.i.d. *during* meals.

SUPPLIED: bottles of 50 and 500.

Each yellow and white capsule contains:

K-U Standardized Amylolytic Enzyme.....
K-U Standardized Proteolytic Enzyme.....
K-U Standardized Lipolytic Enzyme.....
K-U Standardized Cellulolytic Enzyme.....

Send for literature and samples...

KREMERS-URBAN COMPANY • Milwaukee 1, Wisc

Distinctive Rx Specialties Since 1894

in diuresis

salt removal is still the fundamental objective

As salt goes, so goes edema.

A fundamental principle of diuresis is that "increased urine volume and loss of body weight are proportional to and the osmotic consequences of loss of ions."[2] NaClex helps reduce edema by applying this principle.

Apparently functioning in the proximal renal tubules, NaClex limits the reabsorption of sodium and chloride ions. To maintain the essential, subtle balance between salt and water, the body's homeostatic mechanism responds by increasing the excretion of excess extracellular water. Thus the NaClex-induced removal of salt leads directly to a reduction of edema.

How potent is benzthiazide?

Compared tablet for tablet with oral diuretics now available, NaClex is unsurpassed in potency. Mg. for mg., it has achieved optimum diuresis in pharmacologic studies at 1/20 the dose required for chlorothiazide.

What are the major diuretic indications for NaClex?

NaClex produces diuresis, weight loss, and symptomatic improvement in edema associated with conditions such as congestive heart failure, cirrhosis of the liver, chronic renal diseases (including nephrosis), premenstrual tension, toxemia of pregnancy, and obesity. Edema of local origin and steroid edema may also benefit.

To what extent is NaClex useful in hypertension?

NaClex has definite antihypertensive properties, and may be used alone in mild hypertension. In severer cases it may be used with other antihypertensive drugs, potentiating them and permitting their use at lower dosage. In hypertension with associated water retention, NaClex is of twofold value. It may be prescribed for congestive heart failure as an ancillary measure to digitalis. NaClex does not lower the blood pressure of patients who are normotensive.

Can NaClex and mercurials be given concurrently?

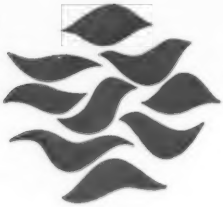
Yes. When so employed, NaClex may increase the efficacy of mercurials. But NaClex alone is often effective enough to eliminate the need for parenteral mercurial administration. Also, NaClex may be effective in cases when mercurials are not.

Supply: NaClex is available in scored, yellow 50 mg. tablets.

References: 1. Ford, R. V., Cur. Therap. Res., 2:51, 1960. 2. Pitts, R. F., Am. J. Med., 24:745, 1958.

A. H. ROBINS CO., INC.

Richmond 20, Virginia



in nine years

Novahistine hasn't cured a single cold... but it has been prescribed for relief of symptoms in over 10,000,000 patients*

Novahistine LP tablets begin releasing medication promptly and continue bringing relief for 8 to 12 hours. Two Novahistine LP tablets in the morning and two in the evening will effectively control the average patient's discomfort from a cold. Each tablet contains 25 mg. phenylephrine HCl and 4 mg. chlorprophenpyridamine maleate.

*Based on National Prescription Audits of new Novahistine prescriptions since 1952.

PITMAN-MOORE COMPANY
DIVISION OF ALLIED LABORATORIES, INC., INDIANAPOLIS 6, INDIANA

Novahistine® LP
LONG ACTING

lowers blood pressure

drains excess water

calms apprehension

Now for the first time, the most widely prescribed diuretic-antihypertensive, hydrochlorothiazide, is combined with the most widely prescribed tranquilizer, meprobamate. Called "Miluretic", it constitutes new therapy for hypertension and congestive failure—*especially when emotional factors complicate treatment.*

What does Miluretic do? Both components are of proven value in the management of hypertension. In congestive failure, Miluretic provides smooth, continuous diuresis. But Miluretic's biggest advantage is that it tranquilizes hypertensive and edematous patients safely and quickly —*a boon to the physician whose patients' emotional reaction to their condition complicates therapy.*

new Miluretic

MILTOWN + HYDROCHLOROTHIAZIDE

Composition: 200 mg. Miltown (meprobamate, Wallace) + 25 mg. hydrochlorothiazide

Dosage: For hypertension, 1 tablet four times a day. For congestive failure, 2 tablets four times a day.

Supplied: Bottles of 50 white, scored tablets

Available at all pharmacies

NEW PROTEIN TISSUE-BUILDING AGENT

ADROYD®

N+

oxymetholone
Parke-Davis

FOR SIGNIFICANT ANABOLIC GAINS IN: ASTHENIA (UNDERWEIGHT, ANOREXIA, LACK OF VIGOR); CONVALESCENCE FROM SURGERY OR SEVERE INFECTIONS; WASTING DISEASES; BURNS; FRACTURES; OSTEOPOROSIS; AND IN OTHER CATABOLIC STATES

■ PROMOTES AND MAINTAINS POSITIVE NITROGEN BALANCE ■ HELPS RESTORE APPETITE, STRENGTH, AND VIGOR ■ BUILDS FIRM, LEAN MUSCULAR TISSUE ■ FAVORABLY INFLUENCES CALCIUM AND PHOSPHORUS METABOLISM ■ PROMOTES A SENSE OF WELL-BEING

ADROYD PROVIDES HIGH ANABOLIC ACTIVITY – The tissue-building potential of ADROYD exceeds its androgenic action to the extent that masculinizing effects have not been a problem in clinical use.* Other advantages of ADROYD are: Neither estrogenic nor progestational. No significant fluid retention. Apparent freedom from nausea, vomiting, and other gastrointestinal disturbances. Effective by the oral route.

See medical brochure, available to physicians, for details of administration and dosage.

Supplied: 10-mg. scored tablets, bottles of 30. 49140

*Reports to Department of Clinical Investigation, Parke, Davis & Company, 1958 and 1959.

PARKE-DAVIS

PARKE, DAVIS & COMPANY · DETROIT 32, MICHIGAN

when they're pregnant they "forget" on purpose

Iron therapy is anathema to pregnant women—and understandably so. They are apprehensive of the unpleasant side effects so common with conventional iron tablets and capsules. Little wonder pregnant patients are notorious for "forgetting" to take their iron.

Since 'Feosol' *Spansule* capsules virtually eliminate side effects, and since—in most cases—the daily dosage is only one capsule, the chance of G.I. distress and "forgotten" doses is reduced to a minimum.

FEOSOL® SPANSULE®

brand of ferrous sulfate — brand of sustained release capsules

the superior presentation of iron

SMITH KLINE & FRENCH

ung der Obstipation bei Erkrankungen mit langer Liegedauer, Medizinische 49:1587-88, 1953. 26 e Anwendung eines neuartigen Kontaktlaxativums vor und nach chirurgischen Eingriffen, Medi 7. Gil Noverques, D., and Linares, M. C.: Nuevo metodo para la preparacion de las radiografia .9-523 (June) 1958. 28. Goeing, H., und Schaumann, W.: Zum Nachweis reflektorisch von de - Abfuehrmittel, Arzneimittel-Forsch.)-282-289, 1955. 29. Hammerl, H., und Pfahler, O.: Ein handlung der chronischen Obstipation, Prakt. Arzt 57:6-8-633, Sept. 15, 1957. 30. Hauff, F. W. ntaktlaxans als Suppositorium in der Chirurgie, Deutsches med. J. 5:484-484, 1954. 31. Hauseg g fuer Roentgenuntersuchungen der Gallen und Harnwege, Klin. med., Wien. 13:241-244 (June) gen mit Laxans Thomae in der Kinderheilkunde, Deutsches med. J. 10:43-44, 1959. 33. Hillger, H. ng des Dickdarms fuer die Roentgenuntersuchungen der Baudhoehle, Deutsche med. Wchnschr : Zur Verbesserung der roentgendiagnostischen Moeglichkeiten im Abdominalbereich, Medizinische bbs, J. Barclay: Intestinal obstruction, Brit. J. Clin. Pract. 12:31-42 (Jan.) 1958. 36. Hofstetter pation; a propos de l'introduction d'un nouveau laxatif de contact le Dulcolax, Praxis 47:419-42 .: Clinical trial of a new drug in obstinate constipation, Canada Nurse 54:1107-09 (Dec.) 1958 um Problem der Obstipation in der klinischen Praxis der Neurologie und Psychiatrie, Wien. med .5) 1957. 39. Keuch, R. K., and Fraser, K. G.: Experience with a new contact laxative in th ological examination, J. A. Canad. Radiol. 9:66-69 (Dec.) 1958. 40. Kolshorn, R.: Obstipations eitung mit Laxans Suppositorien, Muench. med. Wschr. 96:949-950, 1954. 41. Kremer, K., und ueber die medikamentoese Beeinflussung der Darmperistaltik, Aerztl. Wchnschr. 10:529-533, 1955 d Piegsa-Quischotte, Ingeborg: Klinische Erfahrungen bei der Behandlung der Obstipation mi eihe chemischer Verbindungen, Aerztl. Wchnschr. 8:891-892, 1953. 43. Lackner, J.: Roentgeno under Verwendung des Kontaktlaxans La 962, Muenchen. med. Wchnschr. 100:910-911 (June 6) , P.: A new colonic evacuant, bisacodyl (Dulcolax); clinical trial in postoperative cases, Canad 39. 45. Leis, H. P., Jr.: Preparation of patients for proctosigmoidoscopy with a new laxative sup Geriatrics Soc. 4:1, Levine, Jules, and Rinzler, S. H.: Comparison of laxative action of bisacodyl sup ries in acute myocardial infarction, Am. J. Cardiol. 5:108-110 (Jan.) 1960. 47. Lieder, W.: Vor tes zur Roentgenuntersuchung der Gallenblase und Nieren, Ztschr. ges. inn. Med. 13:400-40 lans: Zur Schleimhautdarstellung im Colon mit La 962, Roentgenblaetter 11: (July) 1958 Experiencia clinica en tocoginecologia con el laxante La 962," Acta clin. (Sevilla) 9:2531-41 ervaciones clinicas sobre el empleo de un nuevo laxante en obstetricia y ginecologica, Rev. espan 11 (Mar.-Apr.) 1958. 51. Martin, John A.: Colon preparation for radiological studies using a new

From the film—"Skin Grafting of Extensive Burns" by Harry R. Grau, M.D., Cleveland, Ohio

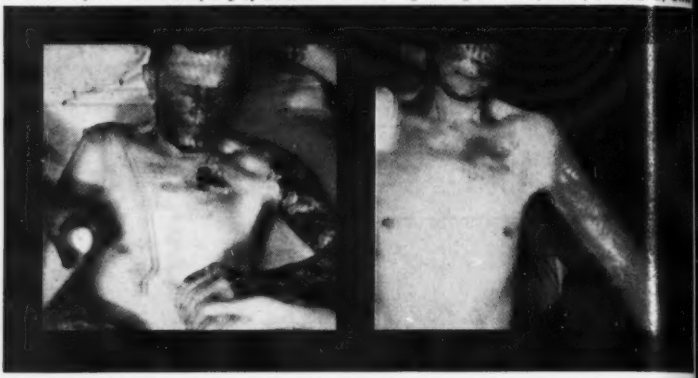


Fig. 1. *68-year-old man with extensive third degree burns caused by gas explosion 2 weeks previously.* **Fig. 2.** *Sixteen days after treatment with* FURACIN Soluble Dressing *and debridement, wounds show healthy granulation tissue free from infection and ready for skin grafting.*

Severe burns: fight infection, facilitate healing

Versatile FURACIN lends itself admirably to burn treatment. FURACIN Soluble Dressing is applied directly, or as impregnated gauze under dry or wet pressure dressings. FURACIN Solution is sprayed on the burn area (exposure technic); this leaves a moist, flexible antibacterial film.

In clinical use for more than 13 years and today the most widely prescribed single topical antibacterial, FURACIN retains undiminished potency against pathogens such as staphylococci that no longer respond adequately to other antimicrobials. FURACIN is gentle, nontoxic to regenerating tissue, speeds healing through efficient prophylaxis or prompt control of infection. Unique water-soluble bases provide thorough penetration, lasting activity in wound exudates, without "sealing" the lesion or macerating surrounding tissue.

the broad-spectrum bactericide exclusively for topical use

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brand of nitrofurazone

in dosage forms for every topical need

Soluble Dressing / Soluble Powder
Solution / Cream / HC Cream (with hydrocortisone) / Vaginal Suppositories / Inserts / FURESTROL® Suppositories (with diethylstilbestrol)
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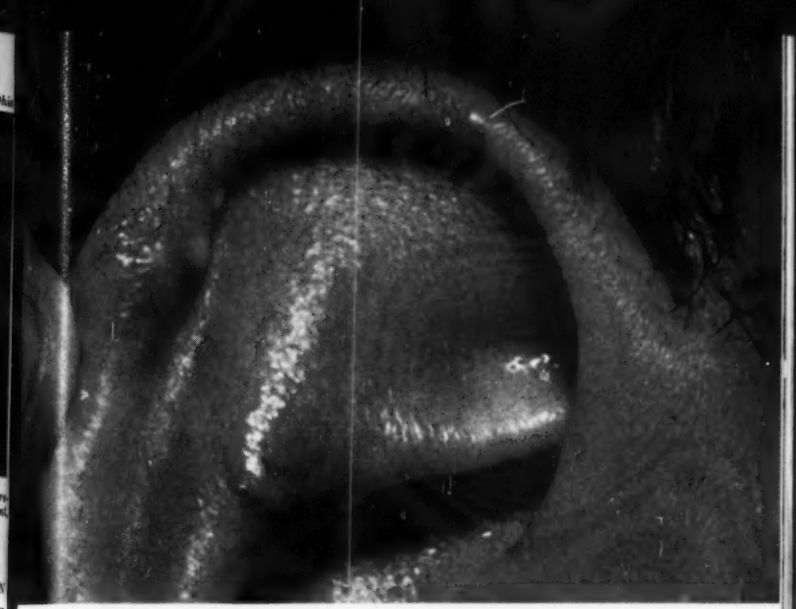

THE FIRST COMPREHENSIVE MEDICATION FOR CHRONIC GOUT AND GOUTY ARTHRITIS

NEW Triurate®

Combines 3 superior agents in 1 tablet:

FLEXIN® **Zoxazolamine†, 100 mg.:** the most potent uricosuric agent available[1-3]—yet exhibits minimal side effects.[4] Facilitates resorption of tophi...relieves chronic joint pain...helps restore mobility.

COLCHICINE, **0.5 mg.:** the time-tested specific for gout—most effective in preventing acute attacks.[1,5,6]

TYLENOL® **Acetaminophen, 300 mg.:** the effective analgesic which does not interfere with uricosuric action.[7,8]

Average Dose: One tablet t.i.d. after meals.

Supplied: Scored, beige tablets, imprinted McNEIL, bottles of 50.

Literature on method of administration and dosage available on request.

(1) Boland, E. W.: World-Wide Abstracts 3:11, 1960. (2) Talbott, J. H.: Arth. & Rheumat. 1:182, 1959. (3) Burns, J. J.; Yü, T. F.; Berger, L., and Gutman, A. B.: Am. J. Med. 25:401, 1958. (4) Kolodny, A. L.: J. Chron. Dis. 11:64, 1960. (5) Beckman, H.: Pharmacology in Clinical Practice, Philadelphia, Saunders, 1952, pp. 515-516. (6) Talbott, J. H.: J. Bone & Joint Surg. 40-A:994, 1958. (7) Connor, T. B.; Carey, T. N.; Davis, T., and Lovice, H.: J. Clin. Invest. 38:997, 1959. (8) Reed, E. B.: Unpublished data.

†U.S. Patent No. 2,890,985

McNEIL LABORATORIES, INC • PHILADELPHIA 32, PA.

343860

Fostex® treats their acne while they wash

completely emulsifies and washes off excess oil from the skin.

penetrates and softens comedones, unblocks pores and facilitates removal of sebum plugs.

removes papule coverings and permits drainage of sebaceous glands.

Patients like Fostex because it is so easy to use. They simply wash acne skin 2 to 4 times a day with Fostex Cream or Fostex Cake, instead of using soap.

Fostex contains Sebulytic®,* a combination of surface-active wetting agents with remarkable antiseborrheic, keratolytic and antibacterial actions . . . enhanced by sulfur 2%, salicylic acid 2%, and hexachlorophene 1%.

*sodium lauryl sulfoacetate, sodium alkyl aryl polyether sulfonate and sodium dioctyl sulfosuccinate.

Fostex is available in two forms—

FOSTEX CREAM, in 4.5 oz. jars
FOSTEX CAKE, in bar form.

Fostex Cream and Fostex Cake are interchangeable for therapeutic washing of the skin. Fostex Cream is approximately twice as drying as Fostex Cake.

Fostex Cream is also used as a therapeutic shampoo in dandruff and oily scalp.

Write for samples.

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Schering

ontact allergy? in any case, for
allergic symptoms, the most widely used
ant histamine is CHLOR-TRIMETON®
chlorprophenpyridamine maleate

wool?

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mix-it-yourself"

milkinol®

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At last a regularity nightcap that usually works overnight, yet doesn't cause griping, loose stools, leakage or rebound constipation.

MILKINOL makes oil and water mix, penetrates the fecal mass with *both* oil and water, softens the stool for comfortable evacuation.

MILKINOL CONTAINS:
Dioctyl sodium sulfosuccinate for penetrant softening action.
Instant aqueous mixing liquid petrolatum for stool permeation.

DOSAGE: Adults: 1 or 2 tbs. in liquid at bedtime only.

SUPPLIED: 12 oz. bottles.

RECTIONS:

Pour Milkinol in glass

Add ¼ glass water or beverage

Drink at once

For a happy good morning

Very tasty, try it yourself, Doctor! Send for samples...

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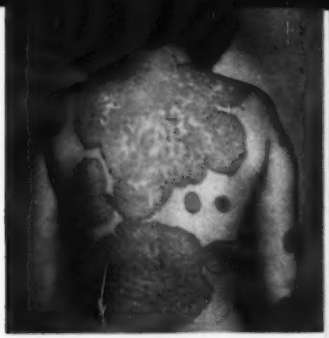
Distinctive Rx Specialties Since 1894

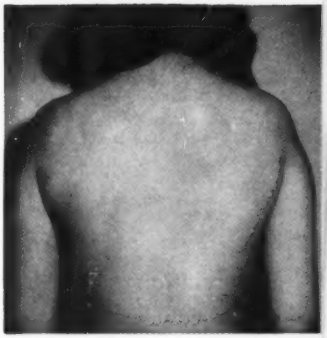
Dependable
Pain Reliever

Professional confidence in the uniformity, potency and purity of Bayer Aspirin is evidenced by ever increasing recommendation. Today Bayer Aspirin is the most widely accepted brand of analgesic in the world.

We welcome your requests for samples of Bayer Aspirin and Flavored Bayer Aspirin for Children.

THE BAYER COMPANY, DIVISION OF STERLING DRUG INC., 1450 BROADWAY, NEW YORK 18, N.Y.





Psoriasis is, today, incurable, but, psoriasis can be a very manageable disease."[1] On Alphosyl "...every patient manifested some favorable response"[1].

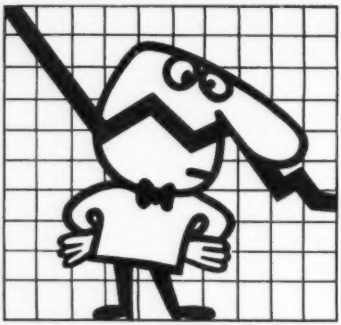
Alphosyl In a recent clinical study of 214 patients with chronic psoriasis, all showed some degree of improvement on **Alphosyl** with almost half of these patients (47%) clearing completely. Now, in everyday practice, you can offer your psoriatic patients more than just hope—you can offer success...because with **Alphosyl** there is a therapeutic difference.

Alphosyl Lotion combines allantoin 2% and special coal tar extract (Tarbonis®) 5%, in a greaseless, nonstaining, vanishing base. Rub thoroughly into lesions two to four times daily, and for maintenance therapy, once or twice a week.

Available: Alphosyl Lotion in 8 oz. bottles; Alphosyl-HC (hydrocortisone) in 4 oz. bottles.

1. Welsh, A. L.: Report, Conference On The Management of Chronic Dermatoses, University of Cincinnati College of Medicine, Cincinnati, Ohio, November 4-5, 1959.

REED & CARNRICK, Kenilworth, New Jersey



A U. S. Senator recently said "In investigating the pharmaceutical industry, we are investigating and inquiring into an industry that has won and which deserves public approval and confidence... It has been my judgment that the hearings to which I have referred, so far have been prejudiced and distorted." To paraphrase a political saying...

Let's Look At The Record On Drug Prices

In relation to "real income," drug prices have actually declined in recent years. At prevailing wages in 1929, it took 91 minutes of working time to pay for the average prescription. Only 86 minutes of labor paid for the average prescription in 1958. As one economist put it, "If the retail prices of drugs had risen as much as the consumer price index since 1939, it would cost the consumer at least an additional one billion dollars to buy the drug preparations now consumed." He goes on to compare the $19.02 per capita drug expenditure in 1958 with the $37.19 spent on tobacco products and $53.72 for alcoholic beverages. • When your patients inquire about the cost of medication, perhaps these facts will be helpful in explaining that today's prescription, averaging about $3.00, is a relatively modest investment in better health and a longer, more productive life.

This message is brought to you in behalf of the producers of prescription drugs. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D.C.

Index to Advertisers

High-concentration topical salicylate-menthol therapy (BEN-GAY) offers safe, penetrating relief of painful joints and muscles resulting from overexertion.

New, objective evidence:

A double-blind study[1] has reaffirm the exceptional efficacy and safety conservative, local treatment chronic rheumatic disorders wi BEN-GAY® (BAUME BENGUÉ), a hig concentration salicylate-menth compound.

The local and systemic effects BEN-GAY were evaluated by entire objective methods in 211 subjects both sexes suffering from vario types of chronic arthritis, bursi neuralgia, myalgia and lumba Changes in range of joint moti were determined by goniometer a by flexion. Topical application BEN-GAY measurably improved arti ular function in 94% when physic therapy was also used, and in 61 without adjunctive treatment. E cient absorption of salicylate throu the skin was indicated by an avera urinary excretion of 15 mg. in hours. No ill effects were repor or observed.

Benefits of Topical Salicylate

in chronic rheumatic disease

Menthol-induced hyperemia plus high local concentration of salicylate has been recently rediscovered as one of the safest and most promptly effective remedies for rheumatoid discomfort due to exposure.

This controlled study offers new ev dence of the efficacy and safety local treatment of chronic rheumat disease with BEN-GAY, one of t safest and most reliable formulae the physician's disposal. BEN-GAY available in two strengths, *Regular a Children's*. THOS. LEEMING & CO., INC. 155 East 44th St., New York 17, N.Y.

[1]Brusch, C.A., et al.: Md. State Med. J.; 5:36, 19

***More efficient salicylate penetration* of treated area and quicker relief of pain is now made possible by the water-washable GREASELESS-STAINLESS BEN-GAY.**

a new antitussive molecule

NON-NARCOTIC

ULO®

Chlophedianol HCl

SYRUP

cough suppressant action	**equal to**	narcotics	Though it reaches peak action somewhat more slowly, the cough-suppressant power of ULO is fully as great as that of narcotics.
duration of action	**greater than**	narcotics	After reaching peak action, ULO maintains its maximal cough-suppressant effect undiminished for 4 to 8 hours.
side actions	**less than**	narcotics	ULO is free from the limitations and undesirable side effects of narcotics... no constipation, no nausea, no gastric irritation, no appetite suppression, no tolerance development, no respiratory depression, no drowsiness.

Indications: Upper respiratory infections • Common cold • Influenza • Pneumonia
Bronchitis • Tracheitis • Laryngitis • Croup • Pertussis • Pleurisy

There are no known contraindications. Side effects occur only occasionally and are mild.

Dosage

Adults: One teaspoonful (25 mg.) 3 or 4 times daily as required.

Children: 6 to 12 years of age, ½ to one teaspoonful (12.5 to 25 mg.) 3 or 4 times daily as required.

2 to 6 years of age, ½ teaspoonful (12.5 mg.) 3 or 4 times daily as required.

Availability

ULO Syrup, 25 mg. per 5 cc. (teaspoonful), in bottles of 12 fluid ounces.

Riker

Northridge, California

CLINICAL REMISSION IN A "PROBLEM" ARTHRITIC

In rheumatoid arthritis with diabetes mellitus. A 54-year-old diabetic with a four-year history of arthritis was started on DECADRON, 0.75 mg./day, to control severe symptoms. After a year of therapy with 0.5 to 1.5 mg. daily doses of DECADRON, she has had no side effects and diabetes has not been exacerbated. She is in clinical remission.*

New convenient b.i.d. alternate dosage schedule: the degree and extent of relief provided by DECADRON allows for b.i.d. maintenance dosage in many patients with so-called "chronic" conditions. Acute manifestations should first be brought under control with a t.i.d. or q.i.d. schedule.

Supplied: As 0.75 mg. and 0.5 mg. scored, pentagon-shaped tablets in bottles of 100. Also available as injection DECADRON Phosphate. Additional information on DECADRON is available to physicians on request. DECADRON is a trademark of Merck & Co., Inc.

*From a clinical investigator's report to Merck Sharp & Dohme.

Decadron®

Dexamethasone

TREATS MORE PATIENTS MORE EFFECTIVELY

MSD MERCK SHARP & DOHME · Division of Merck & Co., Inc., West Point, Pa.